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ABSTRACT

"Measuring Up 2000," published in autumn 2000, graded every state in 5 performance categories related to undergraduate higher education: preparation, participation, affordability, completion, and benefits. "Measuring Up 2000" provides each state with an indication of its performance, and with a benchmark to which it can aspire, top performance defined by actual achievement. Several steps are still required to bridge the gap between "Measuring Up 2000" and informed policymaking. These include: (1) defining the issues with greater precision; (2) assessing current capacity in relation to a public agenda; (3) conducting a policy audit; and (4) formulating an integrated set of policy initiatives designed to improve performance in the targeted areas. In formulating policy, it is essential to align policy tools and to recognize that there is no single answer. Progress can be made in educational policy, but the changes will not be as rapid as most policymakers wish or expect. (Contains 28 figures.) (SLD)

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Some Next Steps for States: A Follow-up to "Measuring Up 2000"

Dennis P. Jones and Karen Paulson

The National Center for Public Policy and Higher Education

June 2001

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A Follow-up to *Measuring Up 2000*

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HIGHER EDUCATION

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Some Next Steps for States:

A Follow-up to *Measuring Up 2000*

By Dennis P. Jones
and
Karen Paulson

June 2001

The National Center for Public Policy and Higher Education

National Center Report #01-2

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Foreword

As I have met with state leaders and policymakers from around the country since the release of *Measuring Up 2000: The State-by-State Report Card for Higher Education*, there have been many requests for the kind of report you now hold in your hands: an overview of steps that states can take *immediately* to begin to address the performance issues raised by *Measuring Up 2000*.

Because each state is unique, *Some Next Steps for States* is not—and should not be seen as—a blueprint that provides ready-made answers for all 50 states. As authors Dennis Jones and Karen Paulson make abundantly clear, this report provides a general overview of the kinds of actions states can take to bridge the gap between performance areas identified by *Measuring Up 2000* and the formulation of effective policy. The states themselves will need to create their own plans for improving performance, and the National Center remains committed to assisting those who seek to do so.

Some Next Steps for States is one of a number of resources that the National Center has made available to states as they seek to improve performance in higher education. Other resources include:

- **www.highereducation.org**—the National Center's web site—allows you to make your own comparisons of state performance in higher education. You can download all or parts of *Measuring Up 2000*, as well as all data used to create the indicators in the report card.
- *Assessing Student Learning Outcomes* summarizes the efforts that states have made to assess student learning in college.
- *Recent State Policy Initiatives in Education* provides an overview of recent state initiatives in education.
- *The Technical Guide to Measuring Up 2000* defines all indicators used in the report card and identifies all data sources.
- *Tests Performed on the Data in Measuring Up 2000* reviews the statistical testing completed on the data in the report card.

All of these resources are available at www.highereducation.org.

On behalf of the National Center, I want to express my appreciation to Dennis Jones and Karen Paulson for their insights in *Some Next Steps for States*—a report that I believe will be a very helpful tool for policymakers.

As always, the National Center welcomes the responses of readers.

Patrick M. Callan
President
National Center for Public Policy
and Higher Education

Executive Summary

In autumn 2000, the National Center for Public Policy and Higher Education (the National Center) published *Measuring Up 2000*, the first state-by-state report card on higher education. Using multiple measures, *Measuring Up 2000* graded every state in five performance categories related to undergraduate higher education—preparation, participation, affordability, completion, and benefits. State grades in each of these areas were calculated based on the performance of the best-performing states. As a result, *Measuring Up 2000* provides each state not only with an indication of its performance in five crucial areas of higher education, but also with a benchmark to which it can legitimately aspire; top performance is defined by a state's actual achievement, not by some theoretical target.

Before effective policy action can be taken, the priorities for this action must be made clear and communicated to policymakers in a way that builds consensus around a public agenda.

The objective of the National Center in publishing *Measuring Up 2000* was not simply to grade states, but rather to encourage discussions by state policymakers about higher education policy and performance. The report card is a first step in creating a demand for state policies designed to address identified shortcomings, but it is *only* a first step. It is important to recognize that *Measuring Up 2000* is not as a recipe book for follow-up action; poor grades suggest areas that need attention in each state, but they do not provide a blueprint for the kinds of policies to be implemented to improve performance in those areas.

What Comes Next?

Several steps are required to bridge the gap between *Measuring Up 2000* and informed policymaking—between the initial stages of issue identification and subsequent action. Overall, these steps include more robust, in-state diagnosis of the signals, and action to either ameliorate problems or build on successes. Primary among these steps are:

1. **Defining the issues with greater precision.** Before effective policy action can be taken, the priorities for this action must be made clear and communicated to policymakers in a way that builds consensus around a public agenda. The first step in this process is to move beyond *Measuring Up 2000* to a more detailed diagnosis of the problems that need to be solved. For

instance, if a state has received a low grade in *Measuring Up 2000* in preparing students for college-level coursework, state leaders need to know:

- In which subject areas are students performing poorly: mathematics? science? writing?
- Are students taking the kinds of courses that prepare them for college? For instance, are they taking the full array of academic core courses? Are they taking Advanced Placement courses?
- Which student subpopulations are performing least well? Are they concentrated in particular parts of the state, or among particular socioeconomic groups? Regardless of the performance measure, poor (or good) performance is not likely to be found uniformly throughout the state. Variations will occur geographically, across subgroups of the population, etc.

Clearly diagnosing the nature of the problems makes it easier for policy leaders to come to consensus around a statement of needs that are given priority for attention.

2. **Assessing current capacity in relation to a public agenda.** Before remedial steps are taken to address state priorities, policymakers need to know the size and nature of the mismatch between the identified needs and the capacity of the state's higher education enterprise to meet them. In this context, the concept of "capacity" has both quantitative and qualitative (fitness for purpose) dimensions. For instance:
   - Does the system need to serve more students than can be accommodated physically?
   - Are the missions and aspirations of the institutions aligned with the needs of the state? For instance, there might be plenty of numerical capacity overall, but not in those institutions that serve students with the highest priority needs.
   - Are there gaps in the program inventory?
   - Is there a lack of access for students in some parts of the state? Is there a lack of access to certain programs or kinds of institutions in some parts of the state?
   - Is the fiscal capacity of the state clearly insufficient?

   No state can afford to make the full array of possible educational programs and activities directly accessible to all citizens of the state. Prior to initiating policymaking, it is important that a general understanding of the mismatches be known.

3. **Conducting a policy audit.** The next step is to identify the existing state policies that should be enhanced or that are acting as barriers to improvement. Higher education institutions—individually and collectively—operate within a complex environment of policies and procedures that have accumulated over a long period of time. These are the same policies that

have yielded the results that are now deemed unsatisfactory and in need of change. Before piling new procedures atop those already in place, it is appropriate to conduct a "policy audit" of the current array. Such an audit typically has two major components:

- Compiling and reviewing existing policies—at least those that are most obviously connected to the areas of performance that have been called into question.
- Interviewing knowledgeable people who can lend their perspectives to and understanding of what is not working and why.

The objective of a policy audit is to clear the underbrush—to remove barriers to progress that would continue to be impediments even if well-designed new policies were put in place.

4. **Formulating an integrated set of policy initiatives designed to improve performance in the targeted areas.** Removing policy impediments is usually not sufficient to improve performance; proactive policy action is also required. The tools available are limited, but one of the most powerful levers involves developing a consensus around a public agenda for change (see steps 1 through 3 above). Other levers include:
    - Financing: determining the amount of funding and the method for distributing it to students and institutions.
    - Accountability: selecting the methods that systems and/or institutions use to measure and report progress, both to policymakers and the general public.
    - Regulation: specifying the procedures to be followed and activities to be undertaken. Although this tool has been the one most frequently used, it is losing favor among many policymakers who believe that adding more "red tape" is seldom a recipe for success.
    - Governance/structure: determining the formal governance mechanisms through which institutional leaders "report," as well as establishing specific vehicles (such as multi-institution cooperatives, public benefit corporations, and blue-ribbon commissions) to reach more limited objectives. Here the diagnostic question is whether the governance structure enhances collaborative and complementary actions in support of a public agenda, or whether it reinforces the natural tendencies of institutions to pursue their own, narrower agendas.

A major—and unfortunate—feature of most policymaking is that these tools are wielded independently. To some extent this phenomenon is a product of the fragmentation of policy initiative and leadership at the state level: the finance tool may be the responsibility of the appropriations committee, the accountability tool may be the responsibility of the education committee, and many of the regulations may fall within the purview of the government operations committee. Whatever the specific assignments for oversight, it is more common than not that the resulting policies work in opposition to each other. Moreover, it is the norm

that incentives built into the funding mechanism lead to institutional behaviors that conflict with the pursuit of public priorities for higher education, and that accountability mechanisms are structured in ways that run headlong into the decision prerogatives of governing boards. It is rare that policy is formulated holistically rather than piecemeal. Yet it is only through an integrated, holistic approach that success is likely to be achieved.

POLICY FORMULATION

In formulating policy, two points are especially important:

1. **Alignment of policy tools is critical.** In order to reach the state's priorities for higher education, it is not sufficient to create a policy initiative. Rather, it is necessary to develop a coherent *strategy* involving an integrated set of policies aligned so that they address a broad array of related topics in the context of a clear *objective*.

2. **There is no single answer.** There are multiple paths for achieving state priorities for higher education performance. Even when consensus is formed around a public agenda for higher education, individuals of right purpose and informed intellect can arrive at different conclusions about how to reach agreed-upon ends. The encouraging observation is that if agreement can be reached on the overall objectives, there is usually room for political compromise in determining the specific tools to be employed. In the absence of agreement on the larger agenda, battle lines harden around the tools to be employed and the emphasis gets displaced from *achieving* something to *doing* something.

It is rare that policy is formulated holistically rather than piecemeal. Yet it is only through an integrated, holistic approach that success is likely to be achieved.

The two-fold cause of innumerable failures of well-intentioned initiatives has consisted of:

- displacing attention from ends to means, and
- falling back on a single policy tool instead of maintaining an integrated strategy that employs multiple tools.

A related culprit has been the propensity to borrow solutions from states with similar problems but different circumstances (the "one size fits all" approach).

To be successful at improving state residents' opportunities for higher education, it is important that:

- The problem be well understood and specified.
- A policy agenda with clear objectives be established.
- The size and nature of mismatches between need and existing capacity be explored.
- The circumstances that govern the array of potential solutions be well understood.

- The existing policies that represent barriers be identified.
- A strategy comprised of multiple components be devised.
- The agenda be pursued persistently and policies aligned consistently.

With this recipe, progress can be made. Unfortunately, the results will not appear as rapidly as most policymakers desire or expect.

Introduction

In autumn 2000, the National Center for Public Policy and Higher Education (the National Center) published the first of its state-by-state report cards on higher education, *Measuring Up 2000*. Using multiple measures, *Measuring Up 2000* graded every state in five performance categories related to undergraduate higher education: preparation, participation, affordability, completion, and benefits. State grades in each of these areas were calculated based on the performance of the best-performing states. As a result, *Measuring Up 2000* provides each state not only with an indication of its performance in five crucial areas of higher education, but also with a benchmark of the level of performance to which it can legitimately aspire; top performance is defined by actual achievement in another state, not by some theoretical target.

The National Center's objective in publishing *Measuring Up 2000* was not simply to evaluate states, but rather to encourage discussions by state policymakers about higher education policy and performance. The report card is a first step in creating demand for state policies that can improve state performance in higher education—but it is *only* a first step. It is important to recognize that *Measuring Up 2000* is not a recipe book for follow-up action; poor grades suggest areas that need attention in each state, but they do not provide a blueprint for the kinds of policies that could be implemented to improve performance.

Now that *Measuring Up 2000* has been released, however, what are the next steps states can take to improve performance in higher education? What kinds of actions are needed to ameliorate problems and build on successes? This brief report is intended as an introduction to bridging the gap between the areas of performance identified by *Measuring Up 2000* and eventual policy formation.

It must be stated at the outset that a nationwide report cannot provide explicit directions to states concerning steps they should take; differences in history, political culture, institutional capacities, and deeply embedded policies and practices create conditions in which the issues raised by *Measuring Up 2000* must be addressed state-by-state. The inability to provide ready-made answers does not, however, mean that no general guidelines apply. There are, in fact, several kinds of actions that can help states bridge the gap between identifying issues that need attention, and working to put effective policies in place. While recognizing that no cookie-cutter approach will work nationwide, this report describes the following actions that states can take to improve performance in higher education.

1. *Defining and analyzing the issues with greater precision.* Before effective policy action can be taken, the nature of the problem must be identified in greater detail. For instance, if a state has received a poor grade in *Measuring Up 2000* in preparing students for college-level work, what specific areas—science? math? reading?—are problematic? Are students taking the full array of academic core courses? Are enough students taking and completing Advanced Placement courses? Which student sub-populations are performing least well? Are they concentrated in certain areas of the state or in particular socioeconomic groups? This report:

   - suggests a set of follow-up "diagnostic" questions that should be asked to probe more deeply into the nature of the shortcomings identified in *Measuring Up 2000*; and
   - recommends some basic forms of analysis that will help to frame data in ways that will answer these diagnostic questions.

   An appendix offers examples of many data displays that are useful in highlighting key aspects of higher education performance.

2. *Creating a policy environment for change.* The information provided in *Measuring Up 2000*—and enhanced by analyses of in-state data, some of which are illustrated here—provides policy leaders with ammunition to pinpoint a limited number of issues most in need of attention and to develop consensus around specific state priorities. As states clarify the issues they need to address, there is a tendency to immediately create new policies to solve the perceived problems. However, the next most productive step is to review existing capacity and policy:

   - A capacity audit assesses the capacity of the current higher education system in the state to address the needs identified through the process of answering the diagnostic questions. For instance, is there a mismatch between institutional missions (or locations) and current or projected state needs?
   - A policy audit identifies existing state policies that have potential for enhancement or that are acting as barriers to improvement. For instance, do some state policies establish incentives—or disincentives—for the higher education system to meet state priorities?

3. *Formulating an integrated set of policy initiatives.* This report provides examples of the kinds of integrated policies that can promote improvements in selected areas of higher education performance.

It is important to note that in this report, as well as in *Measuring Up 2000*, higher education refers to all education and training beyond high school, including two- and four-year, public and private, nonprofit and for-profit institutions. This report, as well as *Measuring Up 2000*, focuses on undergraduate education and training, not graduate education or research.

Long treatises can be—and likely will be—written on each of the key steps needed to improve performance in higher education in particular states. Until such detailed analysis is available, it is hoped that this basic primer will provide useful guidance to those states seeking to begin immediately to maintain and enhance their residents' opportunities for higher education.

Defining and Analyzing the Issues

DIAGNOSTIC QUESTIONS

The first step for states in responding to *Measuring Up 2000* is to ask more explicit and targeted questions about the nature of the issues and problems identified in the report card. These diagnostic questions should mirror the general performance categories and indicators used in *Measuring Up 2000* but should also direct and focus policy formation within the state. The questions are helpful in determining how educational opportunity differs among population subgroups within the state—for instance, by geographic area, race/ethnicity, gender, and socioeconomic group.

In "unbundling" the indicators in *Measuring Up 2000*, the following diagnostic questions are suggested in relation to each of the report card's five performance categories.

Preparation

Measuring Up 2000 evaluates preparation for college-level work by seeking to answer the following overall question: How adequately are students in each state being prepared for education and training beyond high school?

Diagnostic Questions

1. Which students are performing particularly well or poorly on measures of preparation? How does performance differ by geography (county), by race/ethnicity, by urban/rural location, and by family income?

2. Do students have access to instructional experiences that lead to excellent preparation? Are Advanced Placement courses available? Are advanced math and science courses offered? Can students complete the full range of core courses at their high schools? How do these offerings differ by location in the state?

Participation

Measuring Up 2000 evaluates participation and enrollment in college-level programs by answering the following overall question: Do state residents have sufficient opportunities to enroll in education and training beyond high school?

Diagnostic Questions

1. How does participation vary by important student characteristics such as geographic location (county), race/ethnicity, and family income?

2. How does participation in different institutional sectors (two-year, four-year, research, regional, etc.) and major fields of study vary by important student characteristics?

3. How dependent is the state on other states to provide access to higher education?

4. How do participation rates of older, part-time students compare with rates in other states? How do they vary within the state?

Affordability

Measuring Up 2000 evaluates states on the affordability of colleges and universities by answering the following overall question: How affordable is higher education for students and their families?

Diagnostic Questions

1. What are the costs of attendance for students relative to their ability to pay? How does this compare with other states?

2. How does price to students affect participation?

3. To what extent is student aid directed toward low-income students—rather than students who have special abilities (need-based versus merit-based)?

4. How does loan burden vary by income level?

Completion

Measuring Up 2000 defines college completion as follows: Do students make progress toward and complete their certificates and degrees in a timely manner?

Diagnostic Questions

1. Which sectors of higher education exhibit particularly high or low rates of persistence and/or completion?

2. How do persistence and completion rates vary by student characteristics such as race/ethnicity, gender, major field of study, and academic standing?

3. How does degree production—by level of degree and field—compare with that in other states?

4. What factors might influence low persistence and graduation rates?

5. What are the characteristics of "student flow" from one type of institution to another in the state?

6. What factors are associated with differing times to graduation?

7. What is the relationship between high school academic performance and college persistence and completion?

Benefits

In considering the benefits that accrue to states, *Measuring Up 2000* asks: What benefits does the state receive as a result of having a highly educated population?

Diagnostic Questions

1. Is the state importing or exporting college graduates?

2. How is the state's economy changing? Can it absorb the graduates of the higher education system? Does it demand graduates that the higher education system is not producing?

3. How do high school/college wage differentials compare with those in other states?

4. What concerns do employers have about college graduates (for instance, in terms of the number of graduates, workplace skills, and their ability to apply knowledge)? Do these concerns vary in relation to the institutional sector from which the students graduated?

5. How does the state rank with regard to various quality-of-life measures, such as health measures, incarceration rates, and the indicators published in *Kids Count* (Annie E. Casey Foundation)?

6. Is the state participating in the knowledge-based industries of the new economy?

Student Learning

Measuring Up 2000 asked the following overall question about student learning: What do we know about student learning as a result of education and training beyond high school? *Measuring Up 2000* gave all states an incomplete on this measure because they lack information on the educational performance of college students that would permit systematic state or national comparisons.

Diagnostic Questions

1. Do students have the knowledge and skills they need to succeed in the postsecondary system of the state?

2. Do graduates of the postsecondary system have the knowledge and skills they need to succeed in entry-level jobs?

Additional Diagnostic Questions

Although the majority of diagnostic questions are driven by the indicators in *Measuring Up 2000*, additional useful questions focus on the cost-effectiveness of postsecondary education in the state.

1. How does the state's overall postsecondary investment compare with states that perform better on key measures?

2. Are postsecondary investments in keeping with state priorities?

3. Does the state have the capacity to invest more? What is the likelihood that the state will be able to sustain this investment in the future?

Compiling the Basic Data

In grading states on their performance in higher education, *Measuring Up 2000* relies on data that were already collected (no new data collection was involved), and that were available for all (or almost all) of the states. The objective was to compare states using common, not idiosyncratic, measuring sticks. In addition, the report card was designed to provide a broad overview of state performance relative to a set of key policy issues, not to provide a mass of in-depth analyses within each state.

These basic design considerations—necessary for making state-by-state comparisons—limited the amount and kinds of data that could be used to evaluate the performance of higher education within each state. As state policymakers seek more detailed information to guide them in shaping higher education policies, however, they need not abide by these national data constraints. All available and appropriate information should be used in the policymaking process. These additional data fall into four categories:

1. National data that are available in greater detail than provided in *Measuring Up 2000*. For example, additional information is available concerning the preparation and participation of students by demographic characteristics (particularly gender and race/ethnicity). This kind of data is available for:
   - High school completion (for example, see Appendix, Figures 1 and 2)
   - SAT and ACT scores
   - Participation of young and working-age adults in higher education
   - Degree completion (for example, see Appendix, Figures 1 and 2)
   - Educational attainment (for example, see Appendix, Figures 3 and 4)
2. Nationally available data that do not measure performance but that do provide important contextual information about higher education in the state, such as:
   - Projected change in the population by demographic characteristics and by county (for example, see Appendix, Figures 5–11)
   - Projected change in number of high school graduates, by race/ethnicity and gender (for example, see Appendix, Figure 12)
   - Proportion of the population with less than a high school education, by demographic characteristics and by county
   - Participation in different institutional sectors (for instance, public/private, two-year/comprehensive/doctoral) by students with different demographic characteristics (for example, see Appendix, Figures 13A, 13B and 13C)
   - The types of institutions that account for student migration into and out of a state or region (for example, see Appendix, Figure 14)
   - The geographic locations and demographic characteristics of the population by socioeconomic status (for example, see Appendix, Figures 15 and 16)
   - The kinds of jobs—by industry and occupation—available in each county (for example, see Appendix, Figure 17)

In addition, there are data available about crime rates, welfare case loads and other social service demand indicators, typically on a county-by-county basis. The relationships between educational attainment and some of these types of measures can be persuasive in making the case for increasing opportunities for higher education.

3. Data that are available on a regional or sector basis. For example, the Southern Regional Education Board (SREB) and the Western Interstate Commission for Higher Education (WICHE) collect and analyze important data by region. There are also data available by higher education sector (for instance, for public institutions and research institutions).

4. Data that are state specific. All states have reams of information that is critical to policymaking but is defined and collected in ways that are not standardized from state to state. In each state, it is necessary to contact the appropriate state agencies to determine the types of data collected and the conventions used. The most useful data include:

   a. K–12 enrollments and numbers of high school graduates. Fall enrollments by grade level are available in almost all states. However, practices differ substantially from state to state for:

      - Reporting numbers of high school graduates.
      - Including data for private high schools.
      - The extent to which projections are made for key indicators, particularly numbers of high school graduates.
      - The aggregation of these data. For states that aggregate data by county, it is easy to compare state information with data compiled by higher education institutions and federal statistical agencies. For states that aggregate information by school district, economic development district, or other entity, it is more difficult—but still possible—to compare state information with that from other entities.

   b. Population projections. Almost all states have their own demographers who extrapolate population data for those years that fall between the ten-year national censuses. However, practices vary considerably as to the level of detail at which these projections are made. The most useful are those that yield estimates of population by age and race/ethnicity within counties.

   c. High school dropouts. Ways of calculating this statistic—as well as the unit of analysis (for instance, by district or county)—differ substantially from state to state.

   d. College retention and graduation rates. Beginning with 2000–01, this information will become more standardized because of updated data collection practices by the Integrated Postsecondary Education Data System (IPEDS). In addition, however, about half the states have unit record systems that allow calculations to be made for system-level retention and for rates of inter-institutional transfer, as well as for institutional retention

and graduation rates. Where these data exist, they represent an important aid to policymaking.

e. Projections of workforce demand. Most states have agencies—for instance, departments of labor, commerce, or economic development—that prepare workforce demand projections. There is substantial variation, however, in the unit of analysis for which such projections are made. Seldom are they made for individual counties—except in those instances where projections are made for urban counties/metropolitan statistical areas. The most useful information is prepared for planning areas that comprise multiple counties (with counties included in their entirety rather than partially) and that cover the entire state.

f. Student performance. Increasing numbers of states are implementing statewide testing programs for K–12 education (typically for grades 4, 8, and 11, if not more frequently). Although each state has its own standards and approaches to assessment, all states have information about performance variations across geographic regions of the state, by gender and race/ethnicity. In addition, states collect a variety of data on student achievement in college (whether obtained by test or survey), as well as some data gathered in areas such as employment rate by academic field, and licensure pass rates.

DATA ANALYSES

In working to create the conditions for improving public policy in higher education, access to good data is necessary but not sufficient. It is also crucial to transform the data into information that illuminates the dimensions of the problem, and that provides insights into possible remedies. Analyzing the data in useful ways depends, of course, on the kinds of data collected—which vary considerably from state to state. There are some common criteria, however, and this section seeks to provide suggestions in this regard. Illustrations of results of many of the suggested analyses, presented in ways that have proven effective with policymakers, are contained in the appendix.

Preparation

Scores in the preparation category of *Measuring Up 2000* are based on measures of:

- High school completion rates (18- to 24-year-olds with a high school credential).
- Course-taking patterns of 8^{th}–12^{th} graders.
- Student achievement in math, reading and writing, based on scores on the National Assessment of Educational Progress (NAEP).
- Numbers of students performing well on ACT/SAT exams.

- Numbers of scores of 3 or better on Advanced Placement exams.

The first of these—high school completion—is a population statistic for which detailed data can be acquired by geographic area (county), race/ethnicity, and gender. In most instances, presentation of information indicating proportions of 18- to 24-year-olds who have completed high school by county is the most useful because it indicates the preparation of students most likely to attend higher education. Statewide information categorized by race/ethnicity and gender is useful, but it becomes much more useful if it, too, is disaggregated by county. This allows, for example, an understanding that it is not minorities (or males) in all parts of the state who are not completing high school; rather it is those in urban (or rural) parts of the state, or parts of the state with particularly low incomes, etc.

If data about course-taking patterns are available at all, they are likely to be available by district or school. Data disaggregated by school tend to be too voluminous. As a result, district data are preferred, at least initially. If the district data cannot easily be translated to a format that can be presented as a map, a listing (arranged in ascending or descending order) of proportions of students enrolled in advanced classes is a starting point. Arraying the data within groupings of district size provides a different perspective as do groupings by wealth (for instance, expenditures per student) or by composition of the student body (for instance, predominantly minority versus predominantly white). Presentation of information in map form, however, is particularly persuasive to policymakers, largely because they intuitively relate to and understand geographic subdivisions of the state.

Data derived from national assessments often are not extensive enough to allow geographic disaggregation, although differentiations by gender and (sometimes) race/ethnicity are possible. For some examinations available nationwide, disaggregation of data by zip code may be possible. In addition, as more and more states move to wide-scale K–12 testing of one form or another, it is becoming possible to identify characteristics of students who are performing particularly well—or poorly. It is in this area that state-specific data tend to be the most useful adjunct to national data. Presentation of data in terms of the percentage of students performing well or poorly (for example, in the top or bottom quartile) by county, by size of the district, and by wealth is particularly useful.

In presenting data about proportions of students who do well (top 20%) on ACT/SAT scores, it is useful to display information about proportions of students who are test-takers as well—not because this variable explains the scores (the ratings are based on numbers of graduates, not test-takers), but because variations reveal much about expectations of both students and the schools. Displaying the data by district (and in some states, by school) helps to make the case concerning the areas of the state (and sub-populations within those areas) that have the greatest opportunity for improvement.

Finally, data about "passing" AP scores per 1,000 high school juniors and seniors should be augmented by information about enrollments in AP courses per 1,000 juniors and seniors. Again the data should be compiled and displayed geographically—by district, by size of district, and by other important characteristics. If state data allow, additional information about enrollments in dual credit courses and the extent to which students leave high school with college credit is also helpful.

However data are displayed, the objective is to identify schools/counties (and the students therein) whose performance on key measures of preparation provide the greatest opportunity for improvement in the overall state score. The choice of the measures themselves provides policy guidance: students will not succeed in challenging courses if they do not have access to such courses (or if expectations are low and they are discouraged from enrolling).

Participation

Scores in the participation category of *Measuring Up 2000* are based on measures of:

- Enrollment of recent high school graduates in college-level programs.
- Enrollment of working-age adults (ages 25–44) in education and training beyond high school.

In many states, the higher education agency compiles data about county of origin (or high school district of origin) of first-time, full-time college freshmen who are recent high school graduates (for example, see Appendix, Figure 18). These data are typically categorized by college or university in which the students are enrolled. The basic calculation is:

$$\frac{\text{(number of first-time, full-time freshmen enrolled, by county of origin)}}{\text{(number of high school graduates, by county)}}$$

Greater detail can be achieved by subdividing these data by type of institution—doctoral, comprehensive, community college (and private institutions in some states)—and even further by race/ethnicity.

Measuring Up 2000 calculates the participation of young adults through two measures: high school freshmen who enroll in college four years later, and 18- to 24-year-olds who enroll in college. An important explanatory variable is the proportion of these populations who are not eligible for college because they have not completed high school. It may also be necessary to subdivide the drop-out numbers as (1) "true" drop-outs and (2) students who have transferred to another high school or district.

Data on 25- to 44-year-olds enrolled part-time are sometimes more difficult to acquire—not all states compile these data by age category, at least not in a disaggregated fashion. States typically do, however, collect data on part-time students by institution of enrollment, county of origin, and undergraduate and graduate level (for example, see Appendix, Figure 19). A basic calculation of participation for part-time students is:

$$\frac{\text{(number of part-time undergraduates, by county of origin)}}{\text{(number of 25- to 44-year-olds, by county)}}$$

Additional information can be acquired by disaggregating these data by type of institution, and in some instances, by race/ethnicity.

The migration of students into and out of the state offers another perspective on access and participation. *Measuring Up 2000* provides a measure of net migration as a part of the "Facts and Figures" section for each state. To shed more light on higher education opportunity in the state, it is useful to calculate net migration by type of institution—doctoral/research/comprehensive/ baccalaureate/two-year—separately for public and private institutions (for example, see Appendix, Figure 14). In addition, it is useful to ascertain the top 20 (or so) specific institutions attended by the state's out-migrating students. These data allow a state to gauge if:

- Access is being limited because of the absence of particular sectors of institutions in the state or the absence of institutions offering unique programs. For example, it is common for net out-migration to be concentrated in a single institutional sector.
- Out-migration is concentrated in institutions with which states could not compete (for instance, elite/national or church-related institutions) or in institutions where convenience is the distinguishing characteristic.

The results of these analyses serve to pinpoint those parts of the state where participation by either recent high school graduates or working-age adults is particularly low. Information about participation in various kinds of institutions—along with knowledge of the physical locations of institutions and their respective program offerings—can do much to explain participation patterns and indicate the barriers to be overcome if participation is to be enhanced (for example, see Appendix, Figure 19).

Affordability

In the affordability category of *Measuring Up 2000*, the measures fall into the following clusters:

- Family ability to pay: the percentage of income needed to pay for college expenses.

- The availability of state need-based aid.
- The average loan amount that students borrow each year.

For states to understand their in-state variations on these variables, they need additional information about income distributions within the state as well as information about distribution of student financial aid. Among the data that can be compiled readily on these matters are:

- Median household incomes by county (for example, see Appendix, Figure 20).
- Median household incomes by county for families in which the head of household is between age 40 and 60 (that is, those families most likely to have college-age children).
- Median household income by income quintile (for example, see Appendix, Figure 21).
- The amount of unmet need for need-based financial aid. If this is available, it is typically from the state student financial aid agency.

A more sophisticated analysis of ability to pay combines information about personal incomes by county and attendance patterns of students from that county—developing a weighted average cost of attendance relative to income. The calculation for a state is basically:

$$\frac{\sum[(\text{Number of enrollees from the county in each institutional sector}) \times (\text{proportion of income required per institutional sector})]}{(\text{total number of enrollees from the county})}$$

This calculation identifies those institutional sectors in which price considerations are heavily influencing the state result. Similarly, distributions of income by racial groups can be shown, indicating the extent to which economic need is correlated with racial category. Given the legal uncertainties associated with affirmative action in college admissions, it is usually best to deal with affordability as an economic issue rather than as a racial one.

Completion

The measures in this performance category of *Measuring Up 2000* focus on:

- The proportions of freshmen (at two- and four-year colleges) who return for their sophomore years—measures of persistence.
- The proportions of first-time, full-time freshmen completing a baccalaureate degree within five years.
- The numbers of undergraduate certificates, degrees and diplomas awarded per 100 undergraduate students—a measure of degree production by the state's system of higher education.

Unlike the other performance categories in the report card, where disaggregation was primarily by geographic area (county) within the state, "drilling down" in this category focuses on institutions—or types of institutions. If detailed persistence and retention data are available at the state's higher education agency, it will be available for each institution. (Note: comparable data on degree completion will soon be available for all institutions since these data will be required as part of each institution's IPEDS submission.) Thus, analyzing data in persistence and degree completion can best be accomplished by:

- Comparing each institution with top performance as identified in *Measuring Up 2000.*
- Comparing performance with the more detailed (by institutional type) empirical information developed by organizations such as ACT.

The objective is to identify those institutions where performance is well below the best-performing institutions and then to begin the process of determining why this is so and what might be done to improve performance.

With regard to degree production, several additional analyses are suggested. These include determining:

- Comparative degree production by type of award—certificate, associate, baccalaureate separately.
- Comparative degree production by field of award (using Classification of Instructional Programs codes), with special attention to those fields of particular importance for economic development and quality of life in the state, such as health professions, engineering and teacher education.
- Comparative degree production relative to the population to be served (especially for certain professional programs).

In creating these displays, it is useful to compare the state not only with the best-performing states and national averages, but also with selected other states that compete most directly with the state in pursuing economic development opportunities.

As a final variation in this category, it can be useful to change the denominator in the calculation—from 100 undergraduate students to 1,000 high school graduates in earlier years (five years for the baccalaureate degree comparison, three years for the associate degree comparison, and one or two years for the certificate comparison). These displays provide the state with overall measures of degree production conditioned roughly on the size of the potential pool of eligible degree recipients. These displays also subsume considerations of participation and

other similar rates, and provide the state with a perspective on its competitiveness in workforce development (for example, see Appendix, Figures 22–24).

Benefits

The benefits category in *Measuring Up 2000* is somewhat different than the other performance categories in the report card, in that it does not correspond to specific policy interventions. Rather, the benefits category evaluates the benefits that states receive if high performance is achieved in the other graded categories of *Measuring Up 2000*. As a result, disaggregation of these data are not necessarily required and none is suggested here.

There is a closely related area, however, that is not included in *Measuring Up 2000* but for which more detailed investigation is appropriate. Many of the benefits that accrue to a state are as much a function of the state's economy as of the performance of its educational system. For example, states with a productive educational system may not reap the benefits of this system if the state's economy cannot absorb the number of college graduates produced. Similarly, a state can benefit greatly by importing highly educated people. As a consequence, it is useful to display data that compare the state's economy with the economies of those states with which it competes most directly. The basic measures for these comparisons are:

- Distribution of employment in the state, by occupation.
- Distribution of employment in the state, by industry.
- Proportions of gross state product attributable to different sectors of the economy (for example, see Appendix, Figures 25 and 26).
- Detailed information from the New Economy Index, prepared by the Progressive Policy Institute (for example, see Appendix, Figure 27).
- Measures of competitiveness in economic development, as provided by the Corporation for Enterprise Development (www.cfed.org) (for example, see Appendix, Figure 28).

Displaying these economic factors can assist policymakers in linking economic enhancement with higher education performance.

Creating a Policy Environment for Change

Formulating a Public Agenda

The information provided in *Measuring Up 2000*—and enhanced by in-state data and analyses—provides policy leaders with ammunition to pinpoint a limited number of issues most in need of attention and to develop a clear statement of objectives. Policy leadership, however, is a skill in its own right. Information, even if it is presented clearly and effectively, is a necessary but insufficient element in articulating and gaining consensus around an agenda.

In order to move a public agenda forward, state policymakers must:

- Identify needs and articulate a vision. Although data and grades from *Measuring Up 2000* and the follow-up analysis can help identify needs, that information must be linked to a statewide vision. A message that is convincing to state residents is imperative.
- Build consensus around the vision. Although some stakeholders in the state—such as institutional leaders—may understand the information and vision as presented, a broader constituency, including civic and business leaders, must be brought in to discuss the issues raised by the analyses.
- Stay "on message." Having gathered the data and presented the information, every opportunity must taken to reiterate the message in a deliberate and consistent manner. Progress on how well the message is being disseminated to stakeholders should be monitored and reported publicly. Mid-course corrections can then be made with the full understanding of all interested parties.
- Align the implementation tools. Available tools include planning, structure and governance, regulation, budget, and accountability measures. These tools need to be used in mutually reinforcing ways that will enhance the statewide vision while also addressing the areas targeted for improvement.

For a more detailed discussion of the use of information to create a demand for educational improvement and policy action, see *Transforming Postsecondary Education for the 21st Century: The Nuts and Bolts of Policy Leadership*, available from the Education Commission of the States.

THE HIGHER EDUCATION POLICY ENVIRONMENT

As state leaders work to identify and gain consensus around an agenda for change and improvement in higher education, they must be aware that state policy environments are in the midst of upheaval. In relation to higher education, the focus of policies is shifting from postsecondary institutions to clients: learners, employers and government. Rational planning for static institutional models is being replaced with strategic planning for dynamic market models. The advent of burgeoning telecommunications and computer-delivered instruction has made policies based on geographic boundaries and monopolistic markets obsolete. Whereas old policies emphasized centralized control and regulation, the newer, more responsive policies depend on decentralized management using policy tools to stimulate desired responses. Policies crafted in the "new economy" harness marketplace competition for the benefit of the public. Measures of quality have changed from inputs (institutional capacity and faculty characteristics) to outcomes (learning and value-added).[1]

In short, it is necessary to create a policy environment—and, eventually, specific policies—that provide impetus for both students and institutions to change behaviors. Overall, good state policies are consistent in the messages they send to constituents. No "one-size-fits-all"-approach will work, but in general, a good state policy:

- Is integrated with institutional and state accountability frameworks.
- Rewards good practices rather than punishes bad or non-existent practices.
- Promotes the monitoring of behaviors and practices to determine if they are in line with the intended ends.
- Clarifies meaning and intent rather than muddying the waters.
- Accounts for the perspectives of all sectors of higher education, even those with no mandated state relationship (such as private nonprofit and for-profit institutions) but which operate within the state and thus are part of a state's postsecondary capacity.
- Creates incentives for individuals and institutions to achieve state priorities.
- Focuses on goals while allowing flexibility in means.
- Is aligned with other pertinent state policies, and thereby avoids sending mixed or counterproductive signals.

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[1] Adapted from Aims McGuinness, "The Functions and Evolution of State Coordination and Governance in Postsecondary Education," in *State Postsecondary Structures Sourcebook* (Denver: Education Commission of the States, 1997).

With the goal of creating a healthy policy environment responsive to the state's priorities for higher education, many state leaders will immediately want to create new policies and devise new approaches to address the identified needs and goals. While this urge to leap to the new is understandable, it should be delayed slightly—until existing capacity within higher education has been reviewed, and until current state policies have been assessed.

The Capacity Audit

A capacity audit assesses the capacity of the state higher education system to meet the state priorities and needs that have been articulated. The immediate aim is to determine the size and nature of the mismatch—if any—between the state's priorities and the capacity of the higher education enterprise to reach them. In this context, the concept of "capacity" has both quantitative and qualitative dimensions.

- Does the system need to serve more students than it can accommodate?
- Are the missions and aspirations of the institutions poorly aligned with the needs of the state? That is, is there plenty of overall enrollment capacity but not in institutions that are well equipped to serve clients with the highest priority needs? For example, if the data indicate a strong need for associate degrees and there are no public community colleges in the state, that would be an area of mismatch to identify early.
- Are there gaps in the programs offered in relation to workforce needs?
- Do prospective students in some parts of the state lack access? Do prospective students in some parts of the state lack access to appropriate programs or kinds of institutions? For example, if adult literacy is low in a region of the state, but the only higher education provider in that region is the flagship research university, that would suggest a mismatch.
- Is the fiscal capacity of the state clearly insufficient?

No state can afford to make all educational programs directly accessible to all citizens of the state. In effect, the capacity audit provides a "reality check" of the existing institutions in the state and what they do—not what they purport to do. Such data is readily available from the Integrated Postsecondary Education Data System (IPEDS). Prior to initiating policymaking, a general understanding of these kinds of mismatches must be acquired.

The Policy Audit

Higher education institutions—individually and collectively—operate within a complex environment of policies and procedures that have accumulated over time. Under these policies

and procedures, higher education in the state has yielded the results that are now deemed unsatisfactory in specific areas and in need of change. Before adding new policies, programs or procedures onto those already in place, an "audit" of the current array of policies is needed. Such an audit typically has two major components:

- A systematic review of existing policies—at least those that are most obviously connected to the areas of performance that have been questioned.
- Interviews with knowledgeable individuals who can share their understanding of what is not working and why.

The objective of conducting a policy audit is to clear the underbrush—to remove barriers that would continue to be impediments even if well-designed new policies were implemented. Since specific policies and procedures vary enormously from state to state, some general suggestions concerning policy audits are offered here.

Review of Existing Policies

Preparation

The following policies are germane to higher education's role in helping to ensure that high expectations are established for secondary school students and in sharing responsibility for student success with the K–12 schools.

1. Admissions Policies
   - Do the admissions requirements at the state's colleges and universities require students to take advanced courses in science, math, and writing?
   - Are the admissions requirements expressed in terms of knowledge and skills students should have rather than in terms of courses and credits taken?
   - Are there mechanisms for ongoing dialogues between K–12 teachers and higher education faculties about expectations for students entering college?
   - Are there procedures for providing secondary schools with information about the readiness of their graduates for (and performance in) the first year of college? Are there mechanisms for following up with those schools whose graduates do poorly?
2. Policies Regarding the Preparation of Teachers
   - Are there policies to ensure that teachers are prepared to teach the high-expectation courses that students will be required to take?
   - Are there policies to ensure that sufficient numbers of well-prepared teachers will be educated and available in the state?

3. Policies Regarding Advanced Placement and Dual-Enrollment Courses

   - Do admissions policies allow high grades on Advanced Placement exams to be accepted as the equivalent of satisfactory completion of core university requirements? Or do such courses count only as elective credit?
   - Do state policies encourage students to enroll in college courses while they are still in high school? Or do state policies create incentives for school districts to discourage dual enrollments of students (for example, by requiring school districts to pay students' tuition or by decreasing the district's allocation of state resources)?

4. Policies on K–12 Exit Standards and Student Assessments

   - Are statewide exams given in the 4^{th}, 8^{th} and 11^{th} grades?
   - Do students have to demonstrate competence by meeting a set of standards for promotion and high school graduation?

Participation

Questions pertinent to the participation category primarily involve state residents' access to educational opportunity—in terms of geography and time. Affordability (economic access) is treated as a separate category.

1. Program Approval

   - Are geographic factors (influencing access for different clienteles) and program duplication considered in the program approval process?
   - Have "service areas" been assigned to institutions? If so, do the service areas prevent other institutions from serving the needs of a given region?

2. Geographic Accessibility

   - Are there educational sites (such as campuses, branches, and learning centers) located within a reasonable commuting distance for most of the state's population?
   - Do state policies and procedures encourage (or allow) delivery of courses from any appropriate originating institution to these sites?
   - Does state policy explicitly and effectively consider private and proprietary institutions as vehicles for extending access and educational opportunity?

3. Funding Policies

   - Are all instructional activities (regardless of time, place, or method of delivery) considered equally in the funding process?

- Are off-campus credit courses treated the same as on-campus?
- Are night classes treated the same as day classes?
- Are tuition and fees for distance-delivered courses higher than for on-campus courses? Do in-state and out-of-state students pay differential tuition for distance-delivered courses?
- Does the state support courses that lead to certifications but not degrees?

4. Faculty Policies
   - Can faculty be assigned to teach in the evening or off-campus as part of their normal load, or are such assignments always considered "overloads"?
   - Must the institutions pay faculty a premium to teach distance-delivered courses?

Affordability

The major policy issues in the affordability category are those of price (tuition policy) and assistance provided to students to help them pay this price (financial aid policies).

1. Tuition Policy
   - Does the state have a formal tuition policy?
   - Are tuition levels tied to income levels (or other measures of ability to pay) or do they reflect other factors, such as share of institutional costs?
   - Do tuition policies reflect differences by type of institution?
   - Are tuition policies the same for students regardless of where, when, and how they take their courses?

2. Student Financial Aid Policies
   - Does the state have a student financial aid program?
   - What are the criteria for participation in the state financial aid program? Is participation based on need? Is it based on merit?
   - Are part-time students eligible to participate in the state financial aid program?
   - Can institutions waive tuition and fees? If so, are the criteria for doing so established in state policy, or are they established by institutions?

Completion

A wide variety of state policies can affect the rates at which students complete their education. Among the more important are:

1. Funding Policies
    - Are there any features of state funding policy that explicitly reward institutions for student degree completion?
    - Are there any features of state financial aid and tuition policies that explicitly reward students for persisting to degree completion?
2. Articulation and Transfer Policies
    - Are there policies and procedures to ensure that credit for a common core of general education courses can be easily transferred from institution to institution without loss of credit? Are on-campus and distance-delivered courses given the same status?
    - Do state policies require that students with Associate of Arts or Associate of Science degrees be admitted to baccalaureate institutions with junior-level status?

Information Policy

- Does state policy require a statewide student tracking system that provides information about the characteristics of students who are (and are not) successfully completing their educational programs?

Remediation

- Does state policy encourage students to overcome academic deficiencies before attempting more advanced collegiate work? Or does state policy penalize/discourage institutions from engaging in remedial activities?
- Is there evidence that the developmental activities and policies in place are effective and accomplishing their purposes?

Interviews

Interviewing those who are charged with implementing state policies is a very useful aspect of the policy audit. Representatives from colleges, universities and higher education systems are appropriate prospective interviewees, as are those employed by student financial aid agencies, K–12 schools, and various agencies of state government. The primary questions to be addressed in these interviews are:

- What state-level policies or procedures serve as the greatest barriers to improving performance in relation to the state's priorities for higher education?
- What should be done to remove these barriers? Do some policies or procedures need to be eliminated completely, or can they be modified in specific ways?

The answers to these questions tend to reveal two things: (1) it is often the implementing regulations, not state higher education policy itself, that are posing barriers to improvement; and (2) state policies and regulations that are not directed specifically to higher education are often the culprit. Institutions of higher education must operate within the administrative policies and procedures of the state (for example, in matters of contracting, personnel and travel). These government-wide policies are as likely to be barriers to progress as the policies that are specific to higher education. And the government-wide policies are often more difficult to change. Modifying these policies requires either making a government-wide change, or exempting higher education from the policies. Neither solution is easy.

Policy Formulation

As states seek to create a policy environment that provides an impetus for students and institutions to change behavior in ways that help to reach state priorities, it is usually not sufficient to remove existing state policy impediments. Proactive policy action is usually also required. The policy tools available to state leaders to influence student and institutional behavior are limited; in addition to the lever represented by the creation of a public agenda, they include:

- Financing: determining the amount of funding and how it is distributed to both students and institutions.
- Accountability: selecting the methods that systems and/or institutions use to measure and report progress, both to policymakers and to the general public.
- Regulation: specifying the procedures to be followed and activities to be undertaken. Although this tool has been the most frequently used, it is losing favor among many policymakers who believe that adding more "red tape" is seldom a recipe for success.
- Governance/structure: determining formal governance mechanisms through which institutional leaders "report," as well as establishing specific vehicles (such as multi-institution cooperatives, public benefit corporations, and blue-ribbon commissions) to reach more limited objectives.

A major—and unfortunate—feature of most state policymaking is that these policy tools are wielded independently. To some extent this phenomenon is a product of the fragmentation of policy initiative and leadership at the state level: the finance tool may be the responsibility of the appropriations committee, the accountability tool may be the responsibility of the education committee, and many of the regulations may fall within the purview of the government operations committee. Whatever the specific assignments for oversight, it is more common than not that the resulting policies work in opposition to each other. Moreover, it is the norm that incentives built into the funding mechanism lead to institutional behaviors that conflict with the pursuit of public priorities for higher education, and that accountability mechanisms are structured in ways that run headlong into the decision prerogatives of governing boards. It is rare that policy is formulated holistically rather than piecemeal. Yet it is only through an integrated, holistic approach to policymaking that success is likely to be achieved.

There is no tried and true, simple recipe for the formulation of "good" higher education policy. There are too many variables unique to each state to allow prescriptions to be made outside the context of specific state studies. These variables include:

- The specific public priorities around which consensus has been reached to generate a public agenda for higher education.
- The political culture of the state, and the relationship of state government to higher education.
- The structure of the higher education system: who makes which decisions?
- The nature of the relationship between higher education and K–12 education.
- The fiscal environment of the state and the demographic characteristics of its population.

The fact that states are unique—and that policy prescriptions must be crafted in recognition of this uniqueness—should not, however, be cause to suspend further discussion here. It is possible to provide policy guidance without stepping over the line to prescribing specific policy. Two points are especially important: (1) alignment of policy tools is critical, and (2) there is no single best answer.

ALIGNMENT OF POLICY TOOLS: TWO EXAMPLES

In order to reach the state's priorities for higher education, it is usually not sufficient to create a policy initiative. Rather, it is necessary to develop a coherent strategy involving an integrated set of policies aligned so that they address a broad array of related topics in the context of overall objectives. The following illustrations regarding the preparation and participation categories in *Measuring Up 2000* may be useful.

Example 1: Improving Preparation

If the objective is to improve student preparation for higher education—along the dimensions identified in *Measuring Up 2000*—the following elements might be considered as components of an overall strategy for improving state policy.

1. *Use the bully pulpit.* It is not enough for policy leaders to identify "preparation" as a major agenda item. They must also use their positions to reinforce—to educators, business and political leaders, and the general public—why preparation is important in the context of higher education and in relation to opportunity in general. Of course, the key issues must be expressed in terms to which audiences can relate.

2. *Establish expectations.* Policy leaders can establish the levels of performance to be attained, as well as timelines for reaching these performance goals. They can also outline steps to build consensus around these specific objectives.

3. *Structure.* Venues can be created for faculty to meet from across educational sectors (K–12 and higher education) to reach a common understanding of the meaning of "high expectations." What should students know and be able to do in order to fully prepare for college? The objective should be to create a mechanism such as a work group or task force—rather than a new structure—to serve as the neutral convener for conversations that would be difficult for any one of the participants to initiate.

4. *Finance.* There are many fiscal levers that can be applied in pursuit of better performance in preparing students for college-level programs. A sampling includes:

   - Paying students' costs of taking college entrance and Advanced Placement exams, removing the economic barriers for students who cannot afford these expenses.
   - Allowing both secondary and postsecondary institutions to count enrollments for high school students enrolled in college courses (dual enrollment courses).
   - Rewarding students who complete one or more years of postsecondary education before they leave high school (for example, by providing one or more years of free tuition at a state college or university).

5. *Regulation.* While regulation is not always the most effective tool, there are instances where mandates can be useful. For example:

   - Requiring all high school seniors to enroll for full academic loads.
   - Requiring academic assessments of all students.
   - Requiring that courses be taught by teachers who are certified in the field (a mandate which also has major fiscal implications for teacher education programs and other postsecondary institutional functions).

6. *Accountability.* State leaders can require that assessments be performed and, where appropriate, nationally normed so that comparative results can be obtained.

Certainly not all of these policy tools would be employed in any one circumstance. However, a well developed strategy will require simultaneous application of several of these tools.

Example 2: Improving Participation

In relation to the participation category in *Measuring Up 2000*, the generic policy tools are substantially the same as for preparation, but many of the specifics are different. The following elements of a comprehensive strategy might be considered—again, purely as illustrations.

1. *Use the bully pulpit.* As with preparation, it is important to explain why participation in higher education is important to enhancing opportunity for state residents. But it may be more effective if employers rather than political leaders deliver this message, especially if they back it up with action (for instance, by requiring postsecondary-level skills as a condition of employment and/or promotion, and by providing for professional development as a normal part of work assignments).

2. *Structure.* The reality is that most students attend college close to home. This is especially true for working adults, a group that will become a larger part of the postsecondary education market. This calls for an educational system that offers college-level programs where students are, rather than making them travel long distances to take courses. This approach can be accomplished in several ways, such as by offering courses electronically, by providing baccalaureate programs on community college campuses, or by selectively subsidizing access to private institutions that are located in underserved areas of the state.

3. *Finance.* The notions of participation and affordability are closely and frequently linked. As a result, fiscal elements associated with improved participation often focus on student financial aid mechanisms such as:

   - Offering need-based aid that removes economic barriers to participation by low-income students.
   - Allowing part-time students to be eligible for student financial aid.

   But there are other less frequently used elements that should be used more often:

   - Creating incentives for institutions to collaborate in delivering instruction at each other's sites.
   - Financing the installation of a telecommunications network in the state.
   - Funding learning centers whose students can gain access to student services from multiple institutions.

4. *Regulation.* As noted previously, regulation tends to be a blunt instrument that should be used selectively. However, there are occasions when it can be used to good effect in improving and removing barriers to participation. For example:

- Increasing access by capping tuition and fees charged for distance-delivered courses (at or below on-campus levels, for instance).
- Requiring state agencies—or public agencies that receive state funds—to promote/attain higher levels of educational attainment among their workforces (especially those agencies with relatively lower average educational attainments).

5. *Accountability.* The objective in this area is to ensure the availability of information, so that answers to the following questions can be obtained:
   - Are the gaps in participation rates decreasing for recent high school graduates who have different economic circumstances, who have different demographic characteristics, and who live in different parts of the state?
   - Are part-time participation rates among adults increasing and becoming more equalized across the state?

NO SINGLE ANSWER

The second major piece of guidance reflects the reality that there are multiple paths for achieving state priorities for higher education performance. Even when consensus is formed around a public agenda for higher education, individuals of right purpose and informed intellect can arrive at different conclusions about how to go about reaching agreed-upon ends. A classic example is the debate over improving access: should a state work to keep tuition low or favor a strategy of high tuition accompanied by sufficient levels of student aid? And there are other illustrations:

- Using incentive funding versus program funding to ensure delivery of instruction to geographically isolated students.
- Improving articulation versus encouraging enrollment in four-year institutions as a strategy for improving success rates of students normally considered "at risk."
- Emphasizing dual enrollment versus Advanced Placement as a vehicle for preparing students for successful college participation.

The list could be expanded almost indefinitely, but the important point is that there are always options in the ways that problems are attacked. Some alternatives may work out better than others—not because the solutions are inherently superior, but because they fit the circumstances better.

The encouraging observation is that if agreement can be reached on the overall objectives, there is usually room for political compromise in determining the specific tools to be employed. In the absence of agreement on the larger agenda, battle lines harden around the tools to be employed

and the emphasis gets displaced from *achieving* something to *doing* something. The two-fold cause of innumerable failures of well-intentioned initiatives has consisted of:

- displacing attention from ends to means, and
- falling back on a single policy tool instead of maintaining an integrated strategy that employs multiple tools.

A related culprit has been the propensity to borrow solutions from states with similar problems but different circumstances (the "one-size-fits-all" approach).

To be successful at improving opportunity for higher education, it is important that:

- The problem be well understood and specified.
- A policy agenda with clear objectives be established.
- The size and nature of mismatches between need and existing capacity be explored.
- The circumstances that govern the array of potential solutions be well understood.
- The existing policies that represent barriers be identified.
- A strategy comprised of multiple components be devised.
- The agenda be pursued persistently and policies be aligned consistently.

With this recipe, progress can be made. Unfortunately, the results will not appear as rapidly as most policymakers might expect, or would desire.

Appendix

Examples of the Presentation of State Data

FIGURE 1

Distribution of Enrollments and Degrees by Race and Ethnicity—4-Year Institutions (1997)

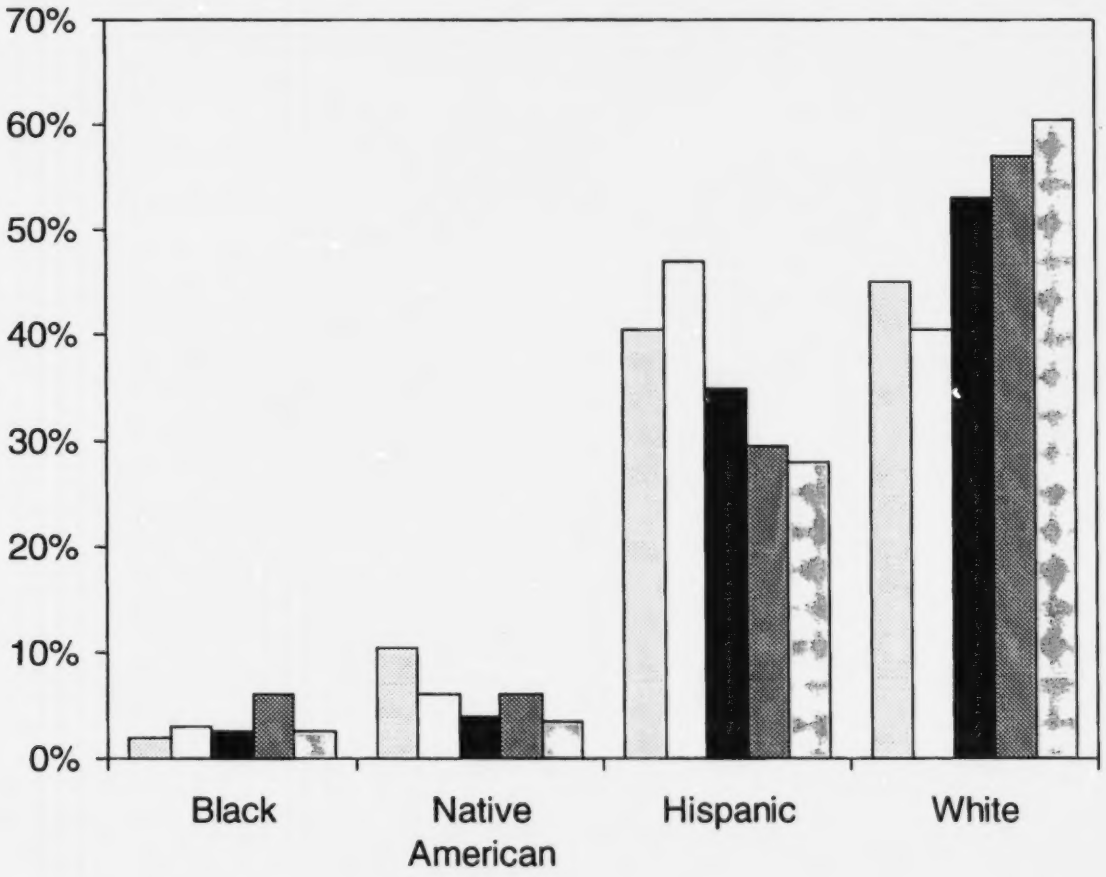

FIGURE 2

Distribution of Enrollments and Degrees by Race and Ethnicity—2-Year Institutions (1997)

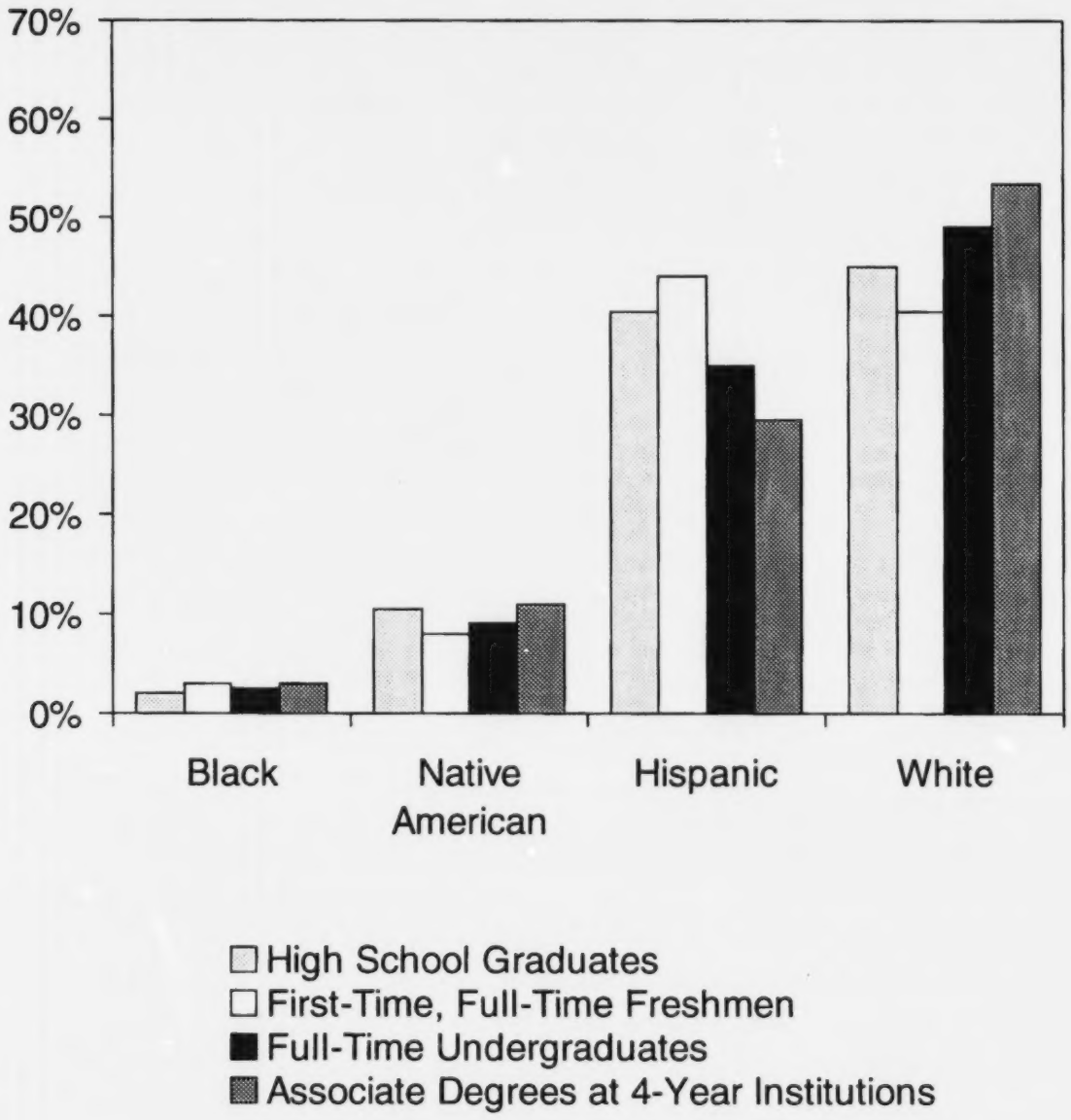

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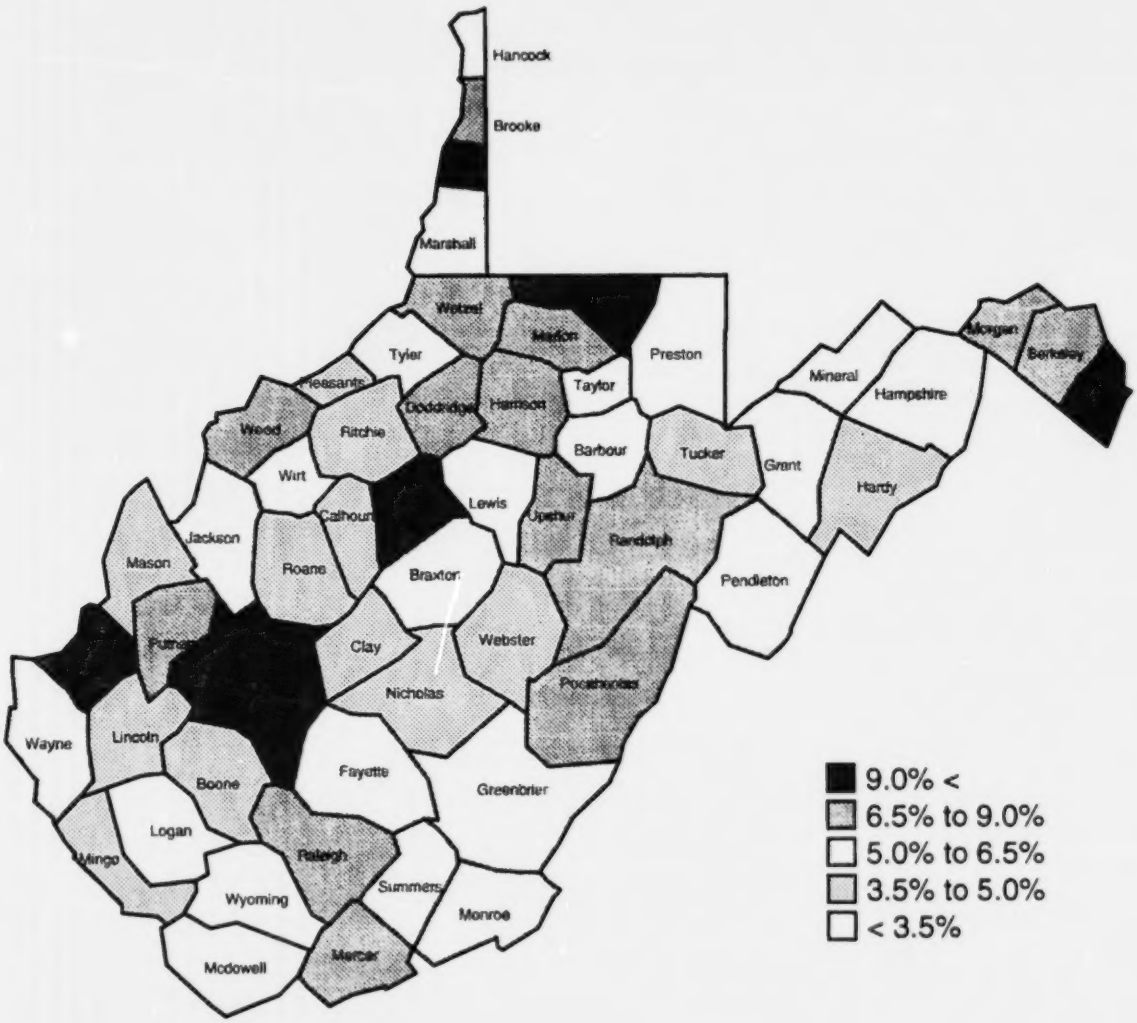
FIGURE 3

Percent of 1990 Population with Bachelor's Degree



State = 7.5%
Source: 1990 U.S. Census

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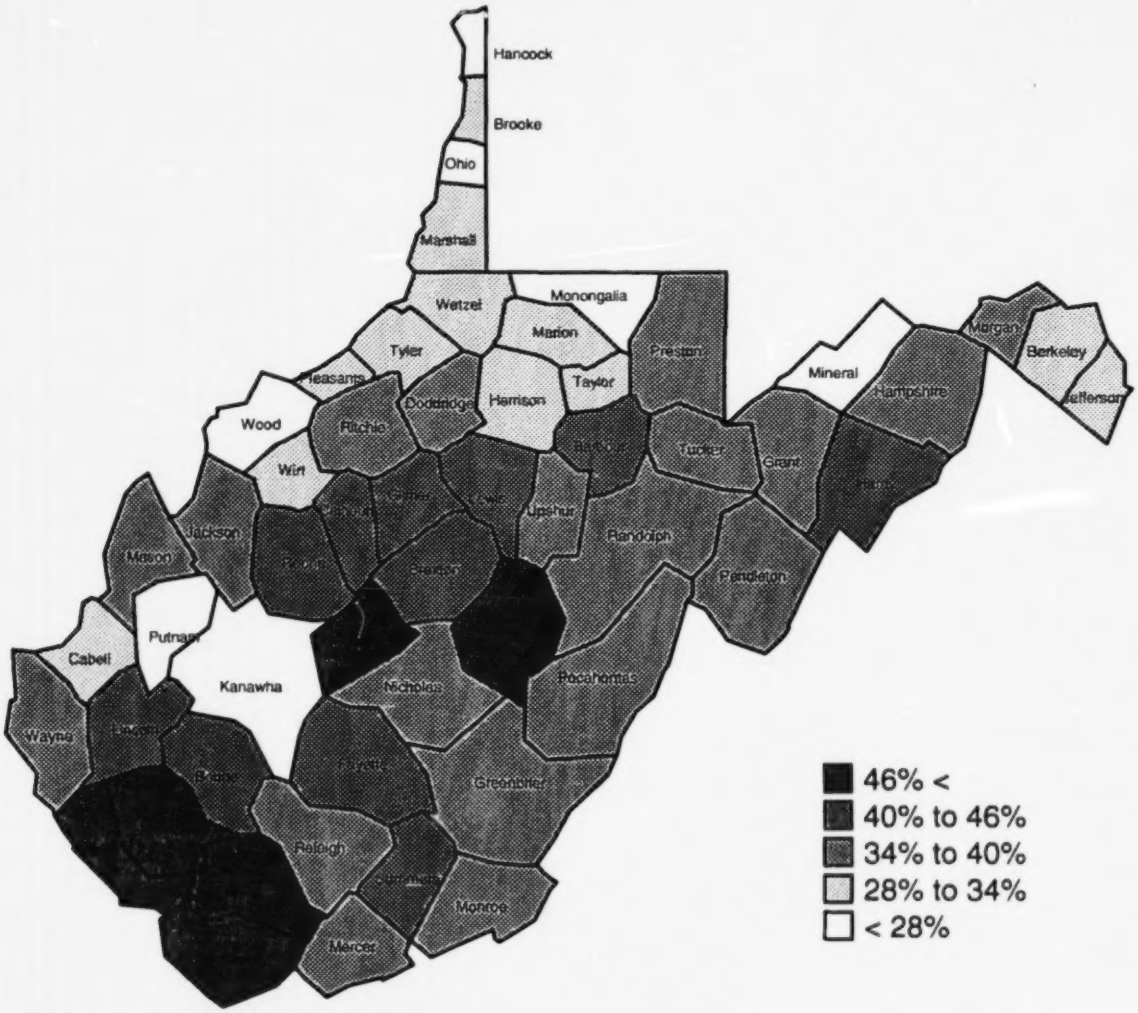
FIGURE 4

Percent of 1990 Population with Less Than a High School Diploma



State = 34.0%
Source: 1990 U.S. Census

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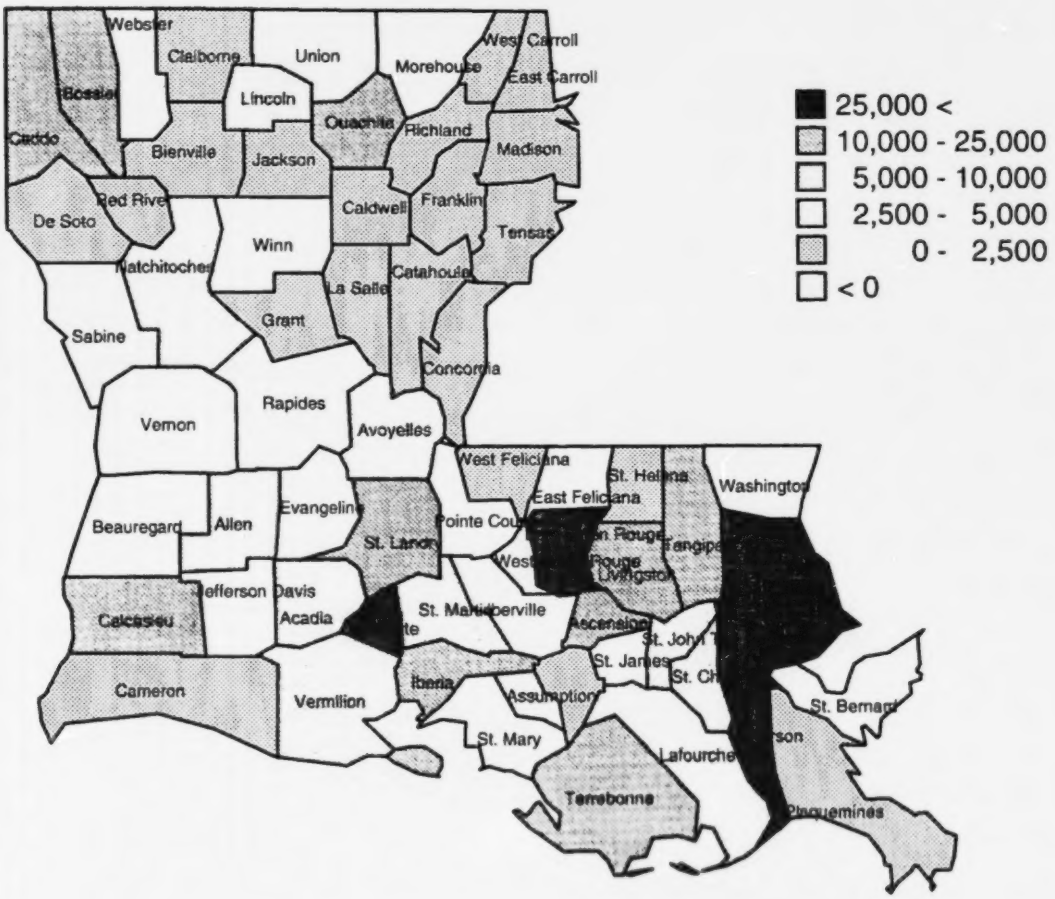
FIGURE 5

Projected Population Growth (2000-2020)



State Growth = 566,860
Source: www.lapop.lsu.edu/proj

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FIGURE 6

Projected Population Changes by Age (2000-2020)

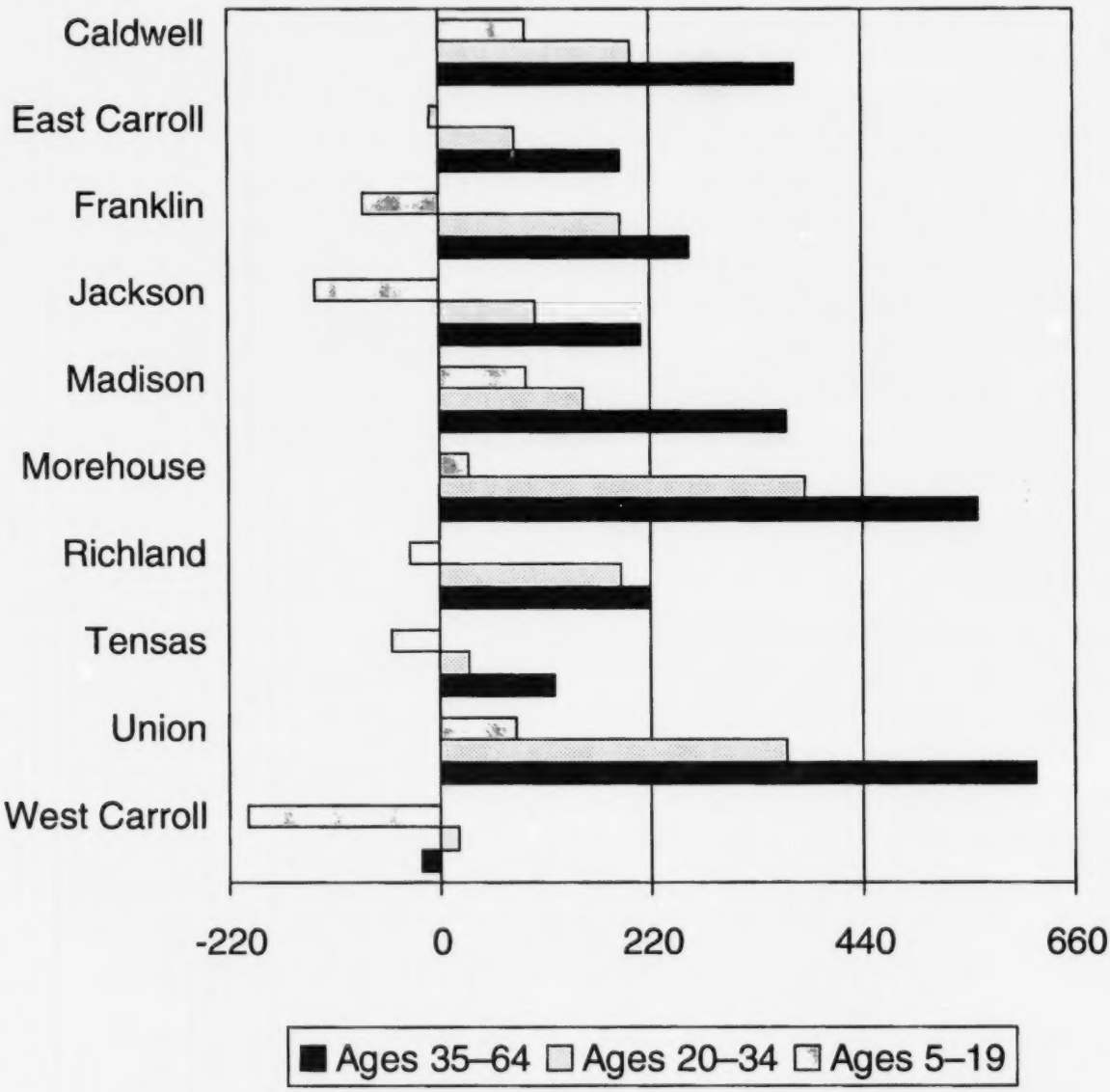

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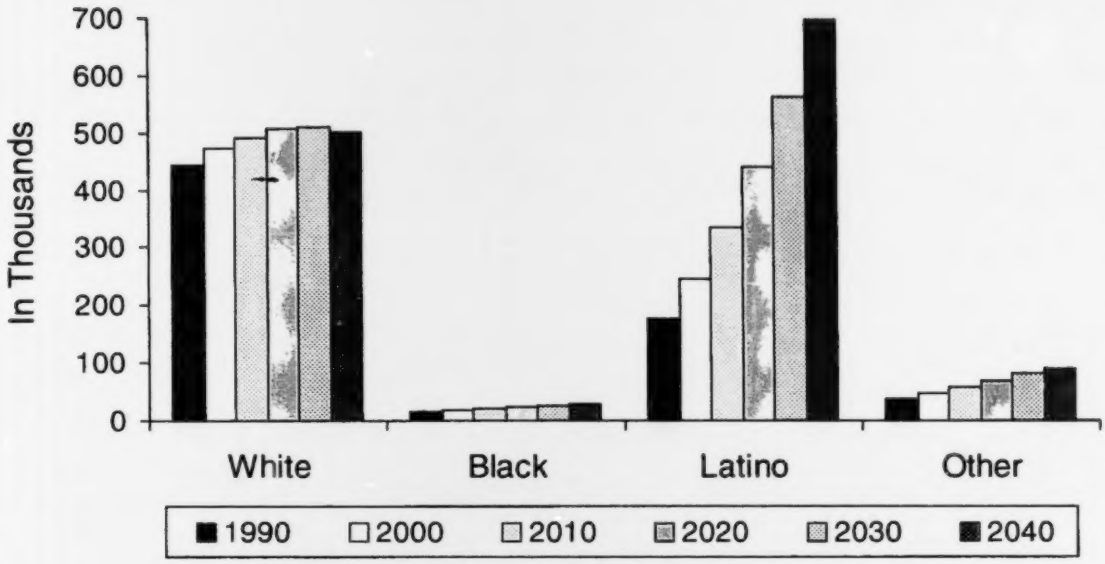
FIGURE 7

Population Projections by Race/Ethnicity
Ventura County (1990-2040)



Population Projections by Race/Ethnicity
Santa Barbara County (1990-2040)

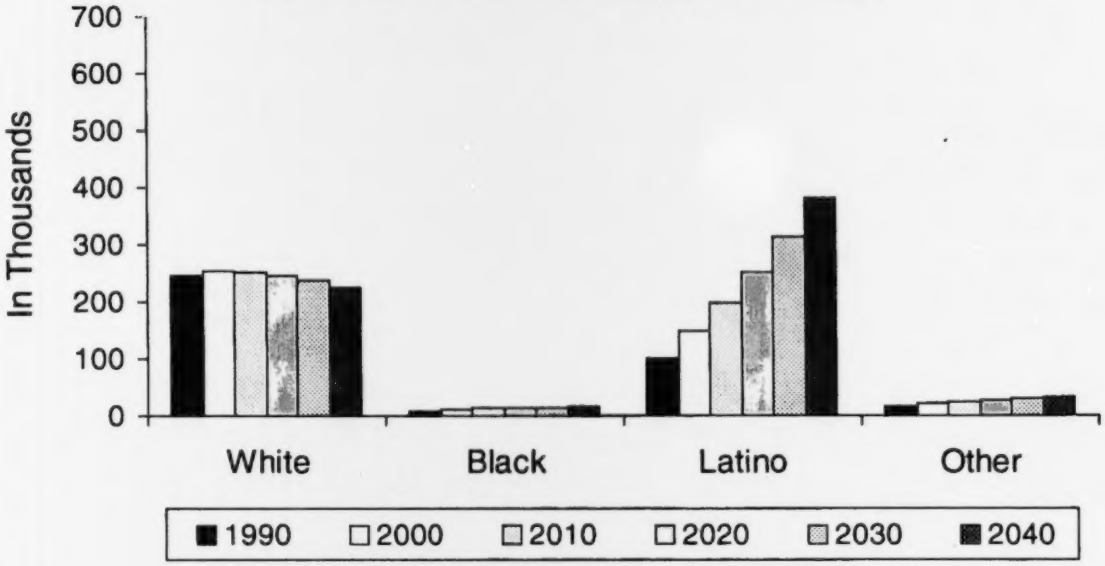
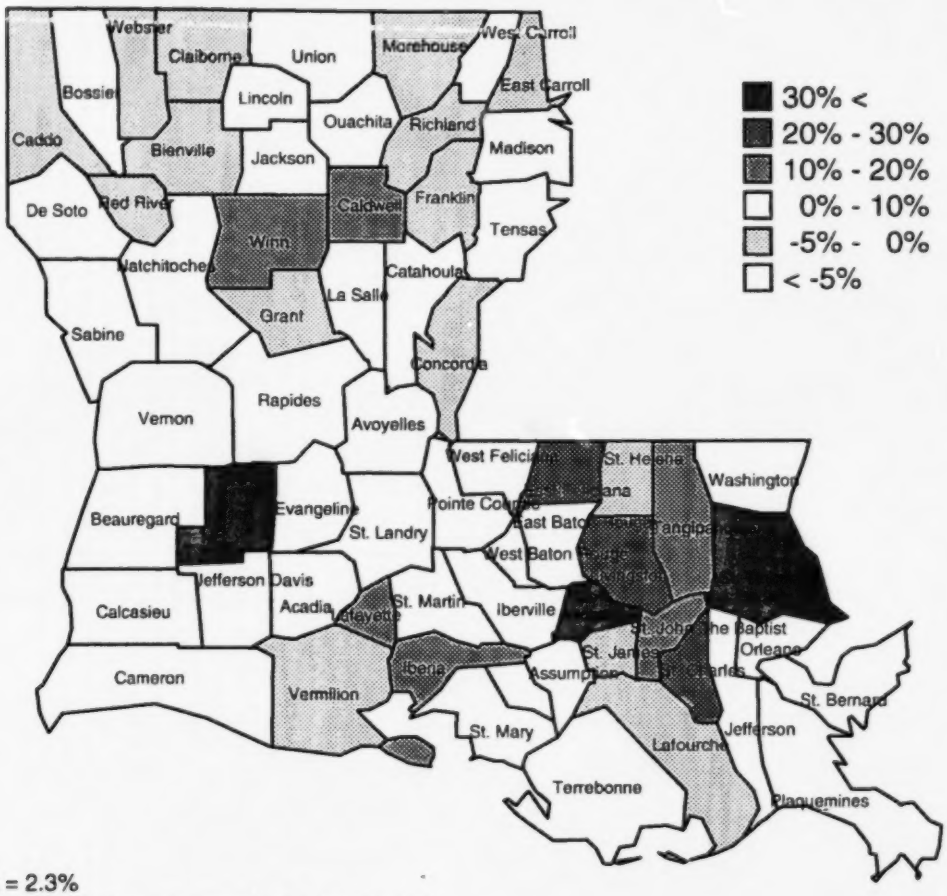


FIGURE 8

Projected Change in Population Age 5-19 (1990-2015)



Louisiana = 2.3%
Source: 1990 U.S. Census, www.lapop.lsu.edu/proj

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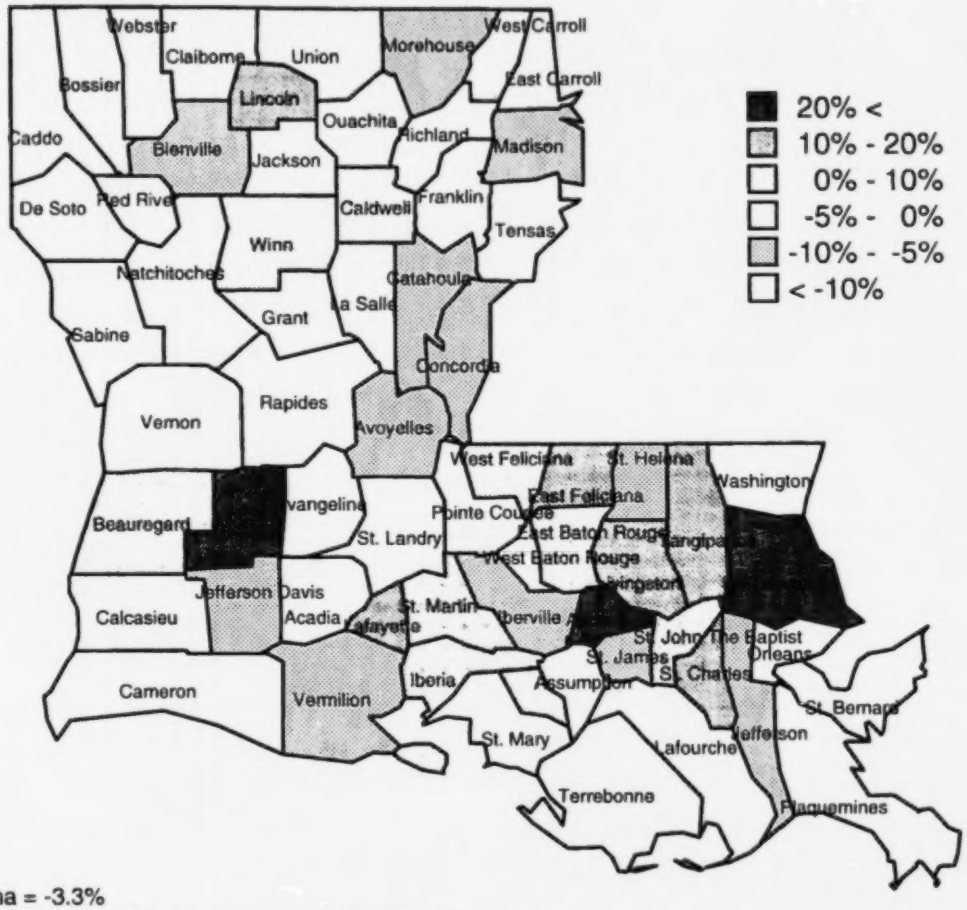
FIGURE 9

Projected Change in Population Age 20-34 (1990-2015)



Louisiana = -3.3%
Source: 1990 U.S. Census, www.lapop.lsu.edu/proj

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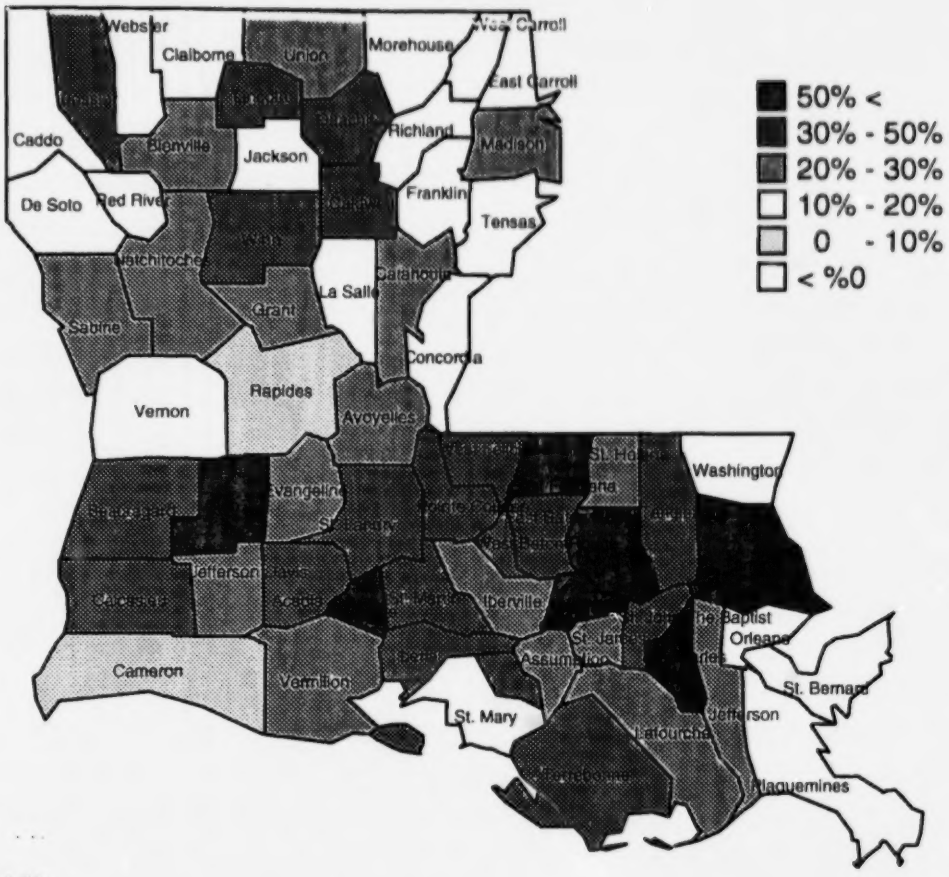
FIGURE 10

Projected Change in Population Age 35-64 (1990-2015)



State = 30.7%
Source: 1990 U.S. Census, www.lapop.lsu.edu/proj

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FIGURE 11

Projected Population Change by Age (2000-2020)

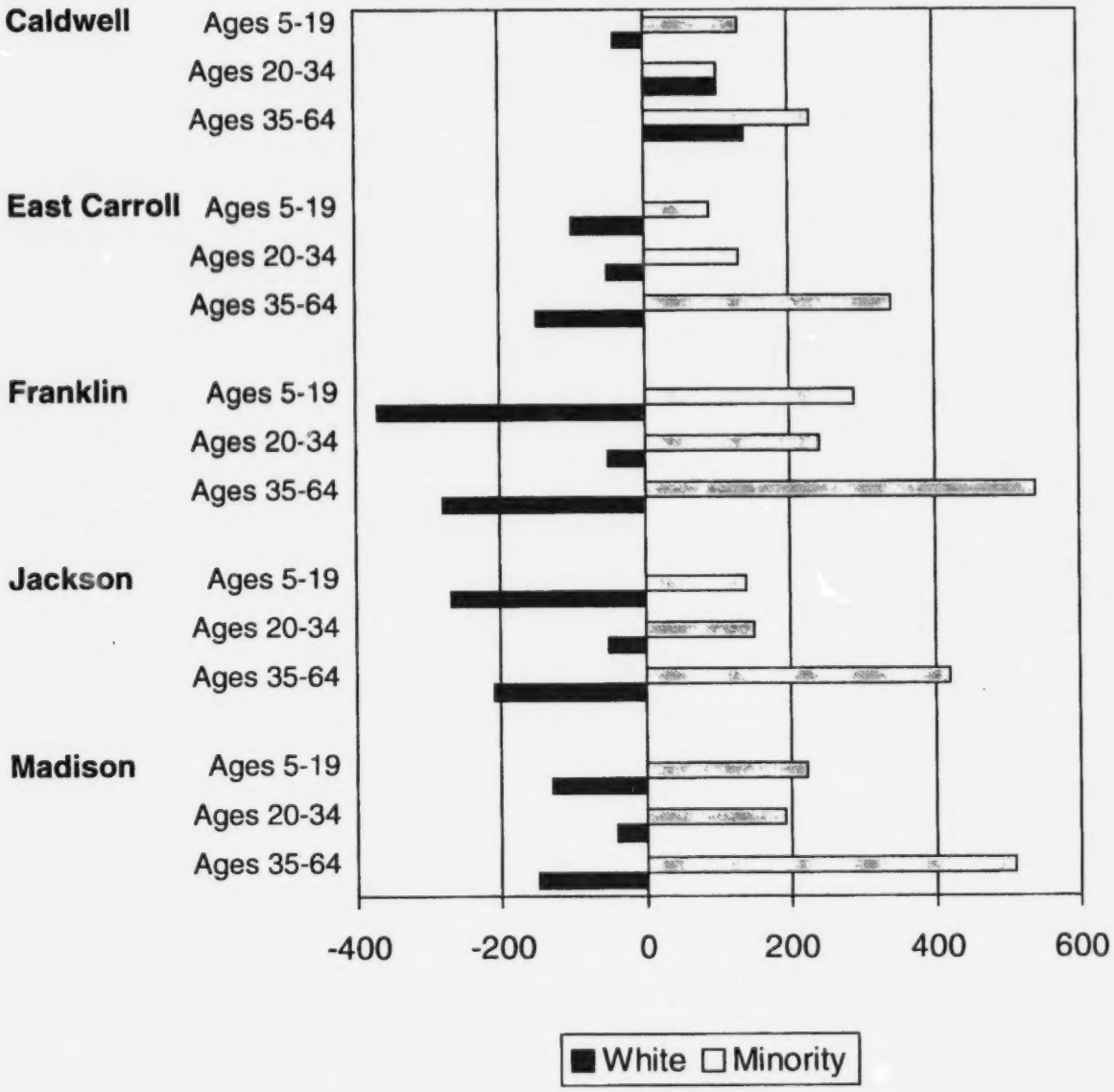


FIGURE 12

Trends in High School Graduates
Florida

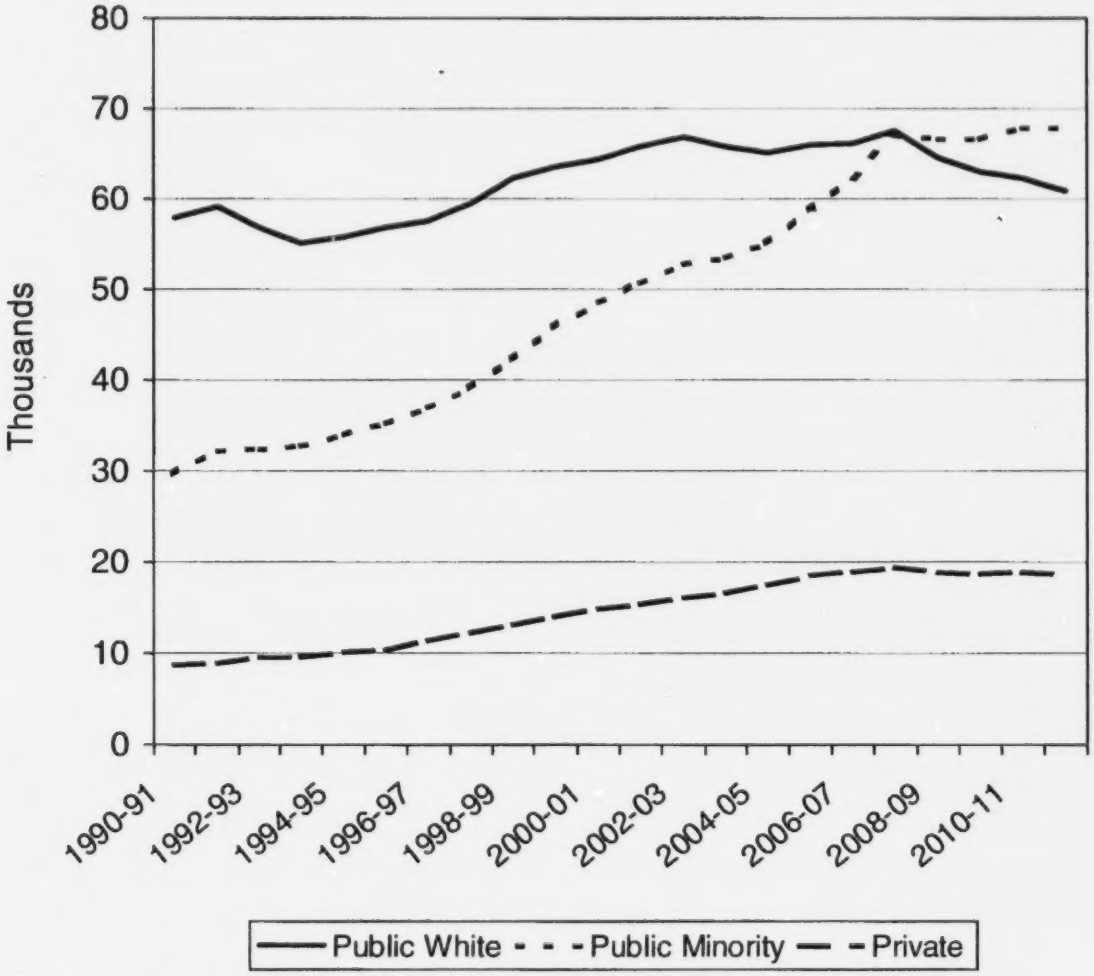
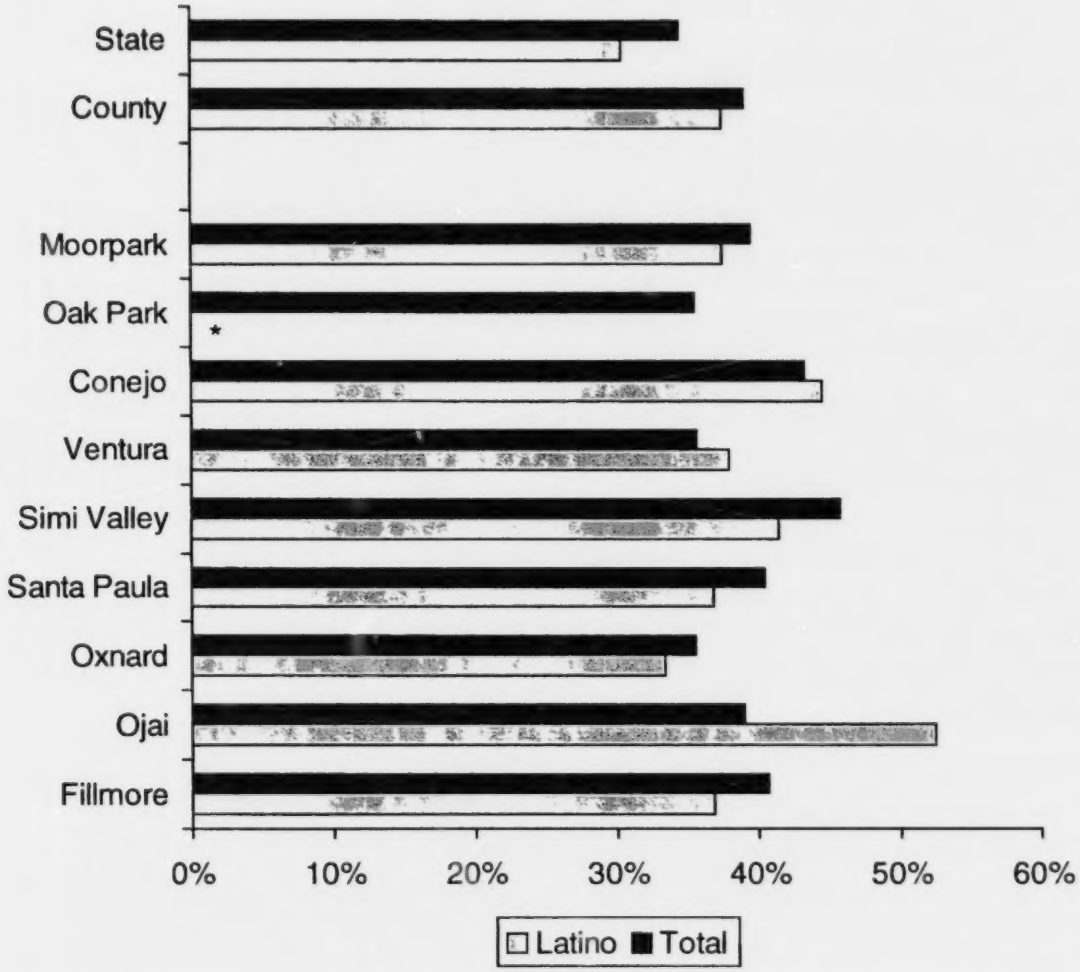


FIGURE 13A

College Participation Rates—Community Colleges Ventura County (1993-94)

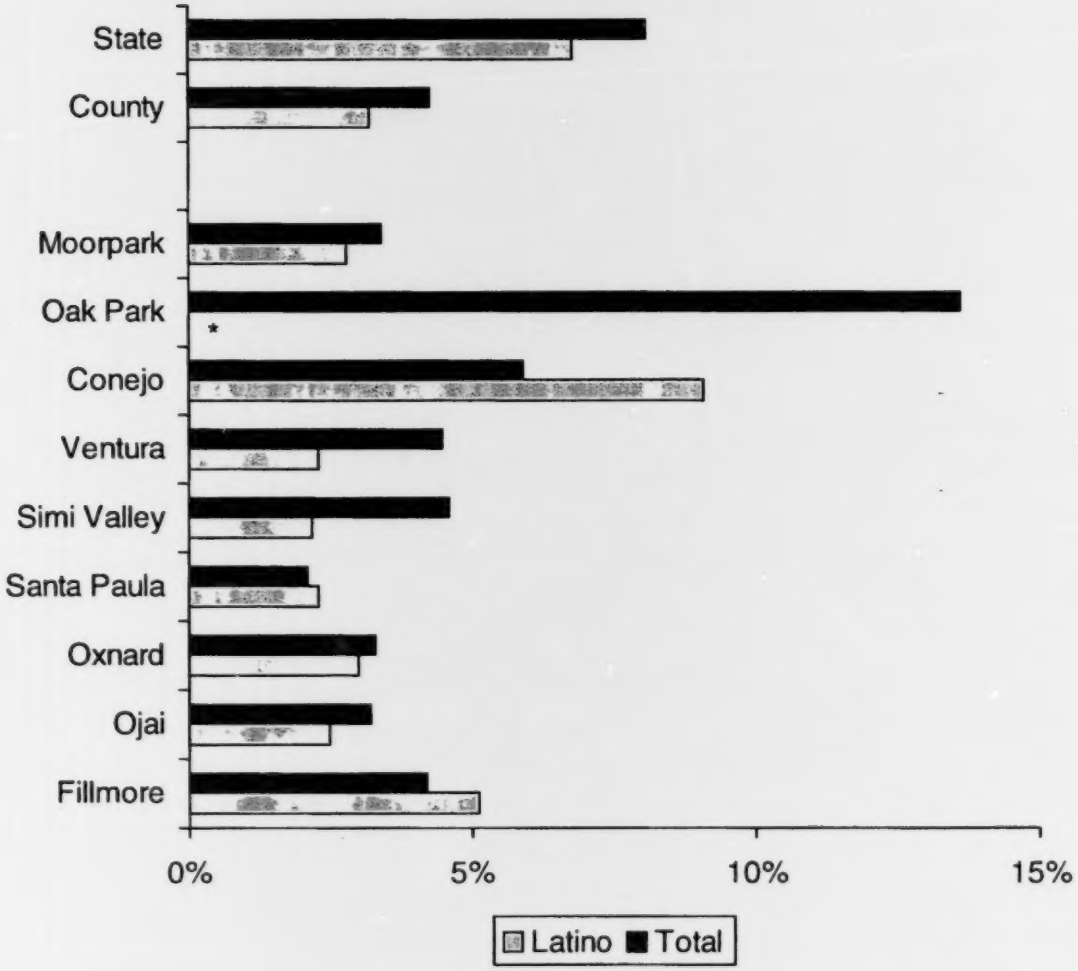


Source: California High School Performance Report, 1994-95

* Number not significant

FIGURE 13B

College Participation Rates—CSU System
Ventura County (1993-94)

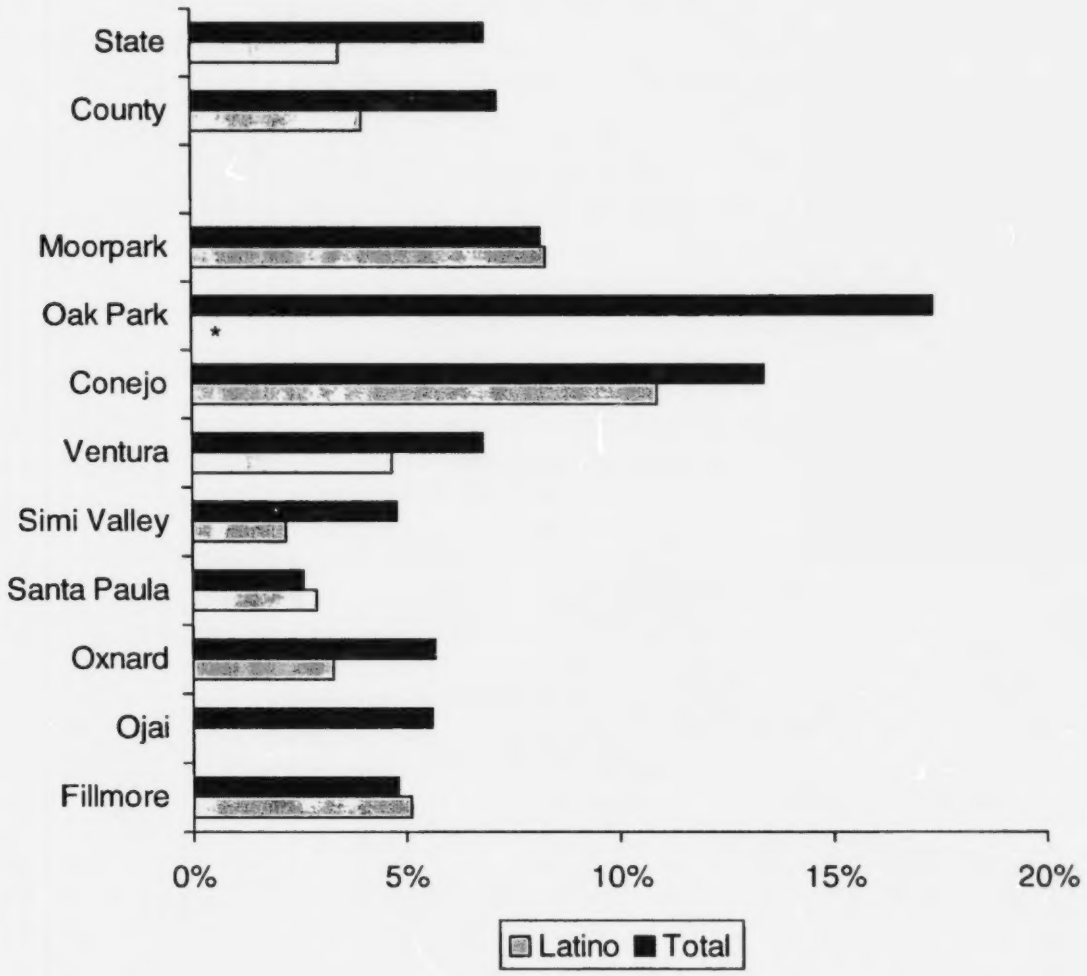


Source: California High School Performance Report, 1994-95

* Number not significant

FIGURE 13C

College Participation Rates—University of California System, Ventura County (1993-94)

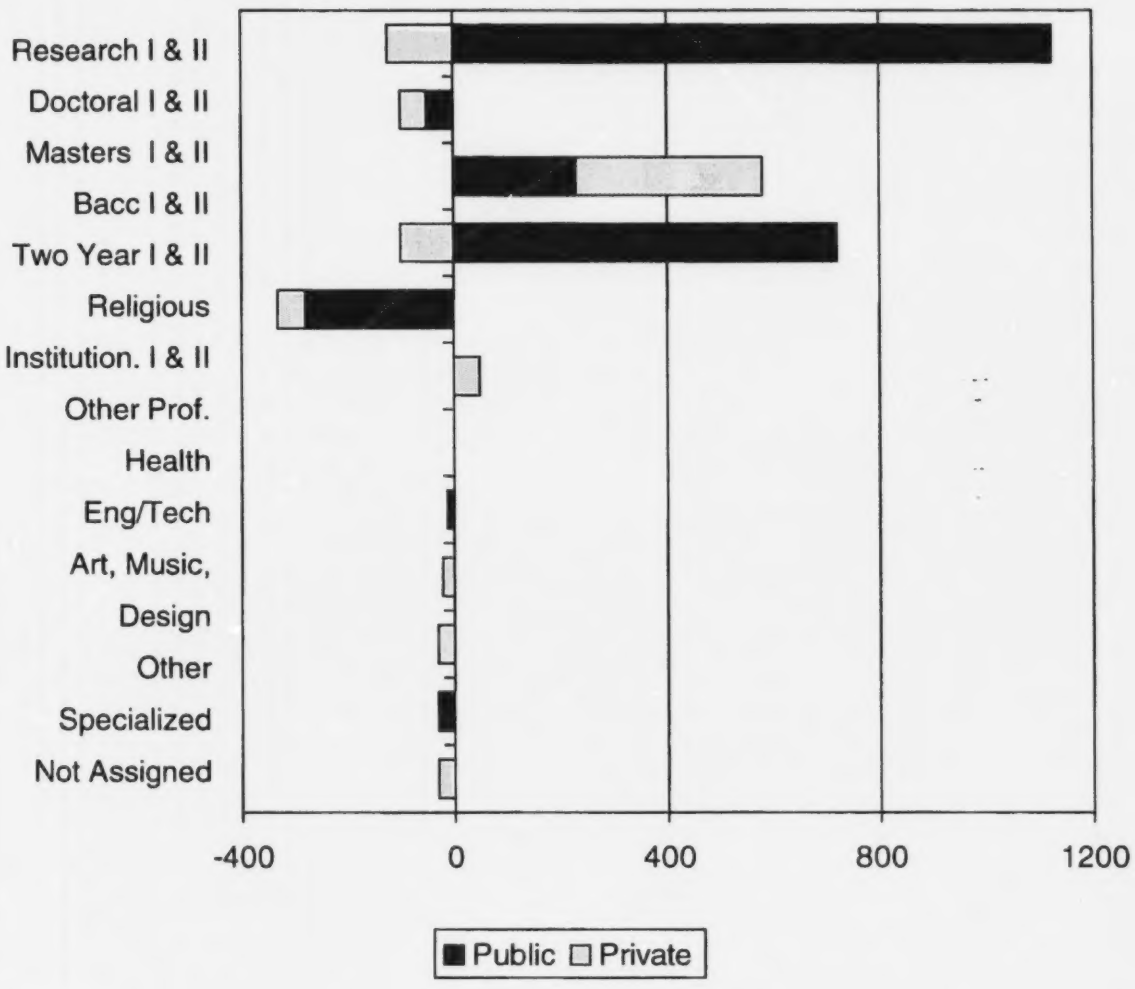


Source: California High School Performance Report, 1994-95

* Number not significant

FIGURE 14

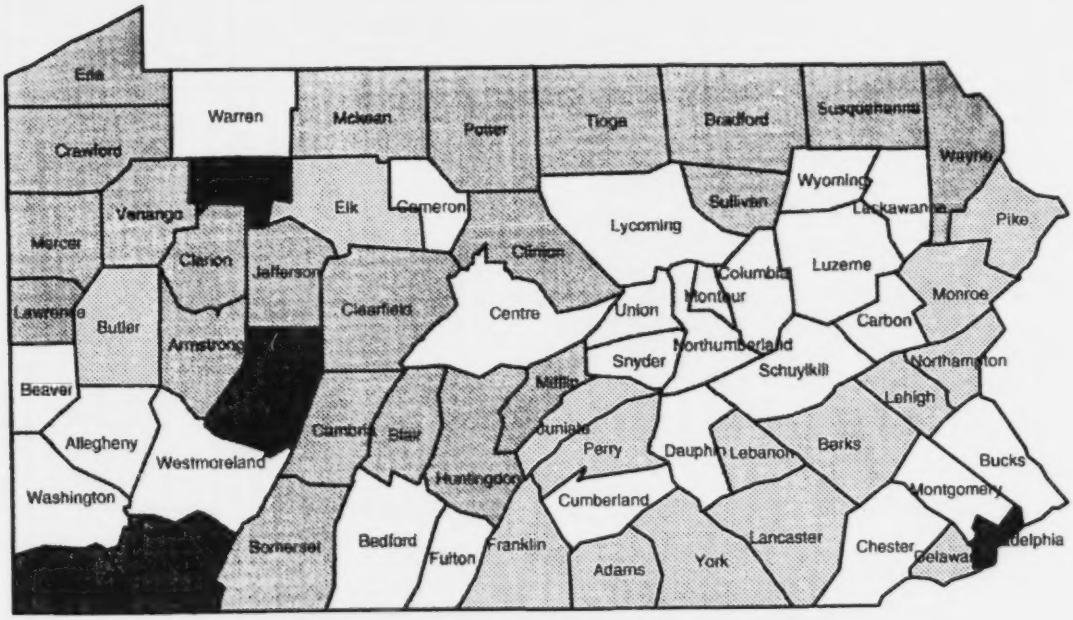
Net Imported Students By Carnegie Type (1996)



Source: IPEDS, 1996

FIGURE 15

Estimated Percent Living in Poverty (1997)



15% <
12% to 15%
9% to 12%
6% to 9%
< 6%

State = 10.9%
Source: U.S. Census Bureau

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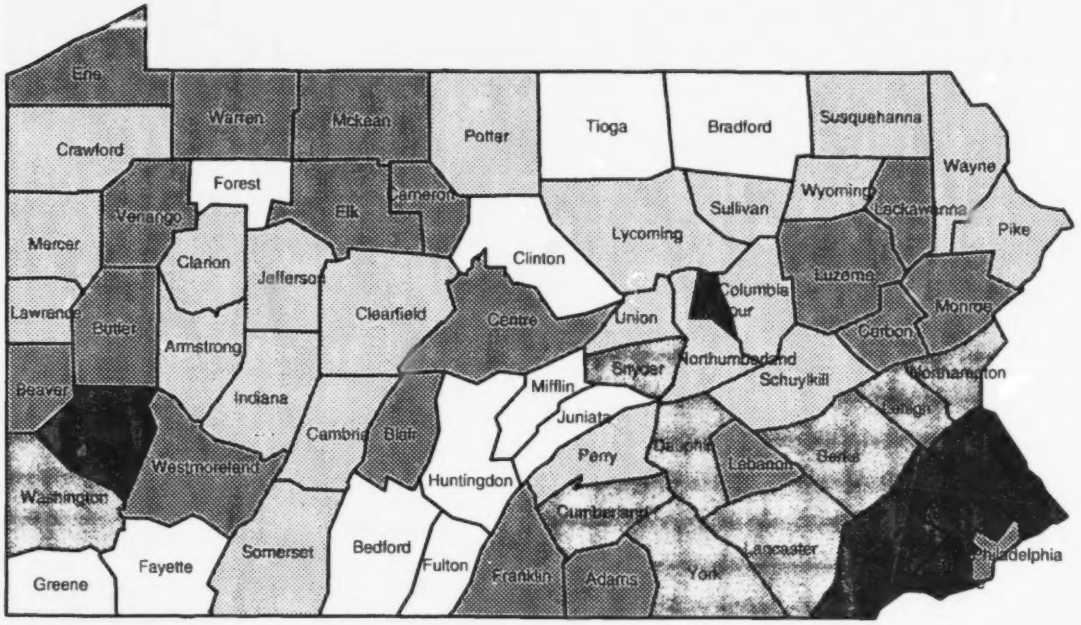
FIGURE 16

Per Capita Income (1998)



- $30,000 <
- $25,000 to $30,000
- $22,000 to $25,000
- $20,000 to $22,000
- < $20,000

State = $27,469
Source: Bureau of Economic Analysis

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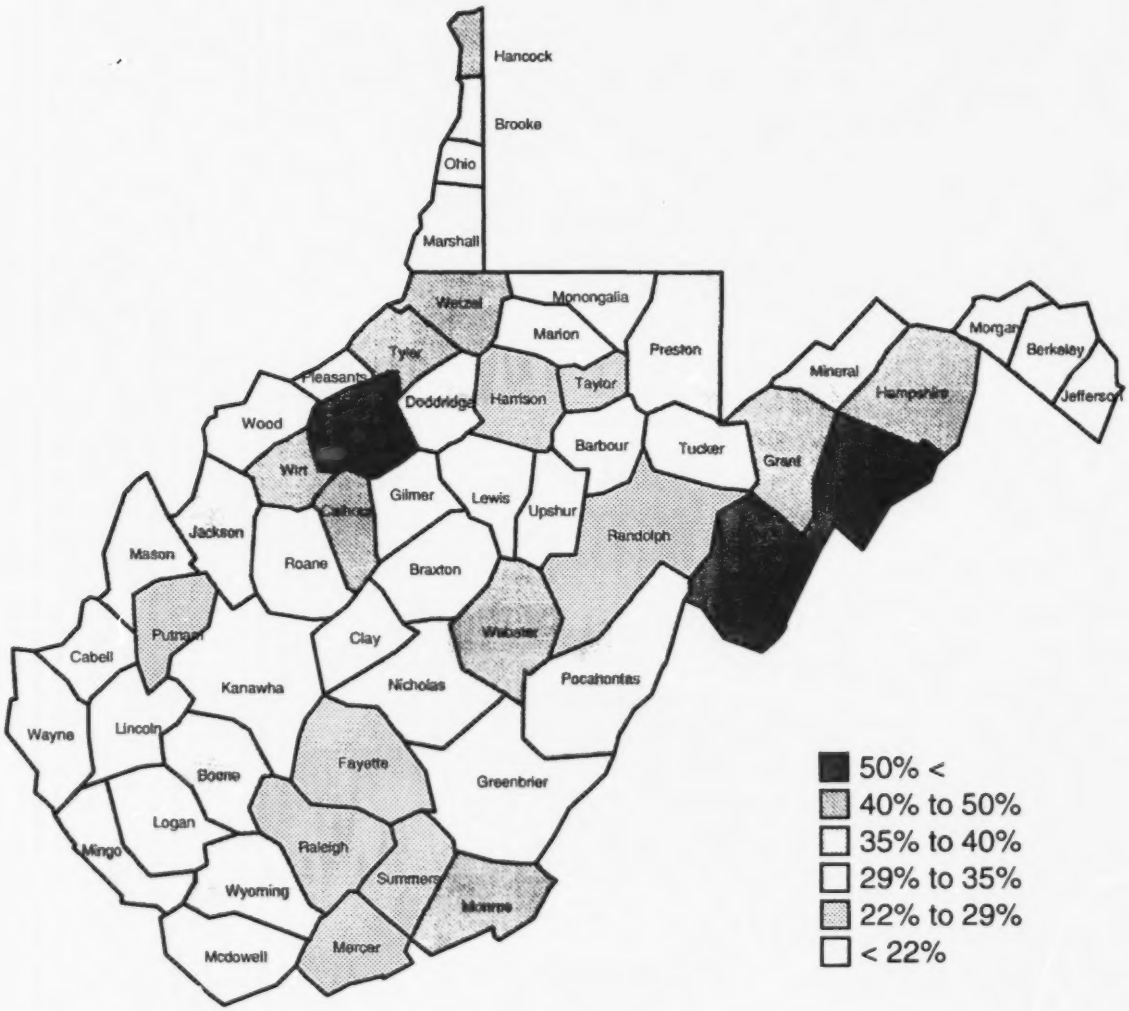
FIGURE 17

Percent Goods-Producing Industries



State = 29.1%
Source: 1990 U.S. Census

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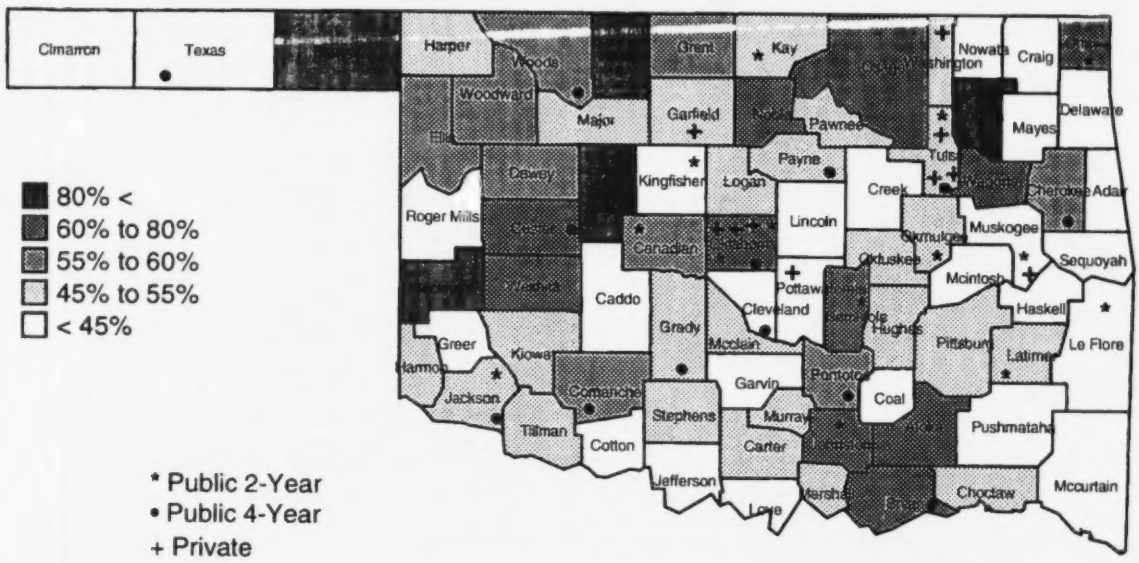
FIGURE 18

Fall 1997 First-Time, Full-Time Freshmen as a Proportion of High School Graduates



State = 52.2%; Beckham County is highest at 152.3%. High School Graduates are a three year average of 1994-95 through 1996-97.
Source: Oklahoma Board of Regents

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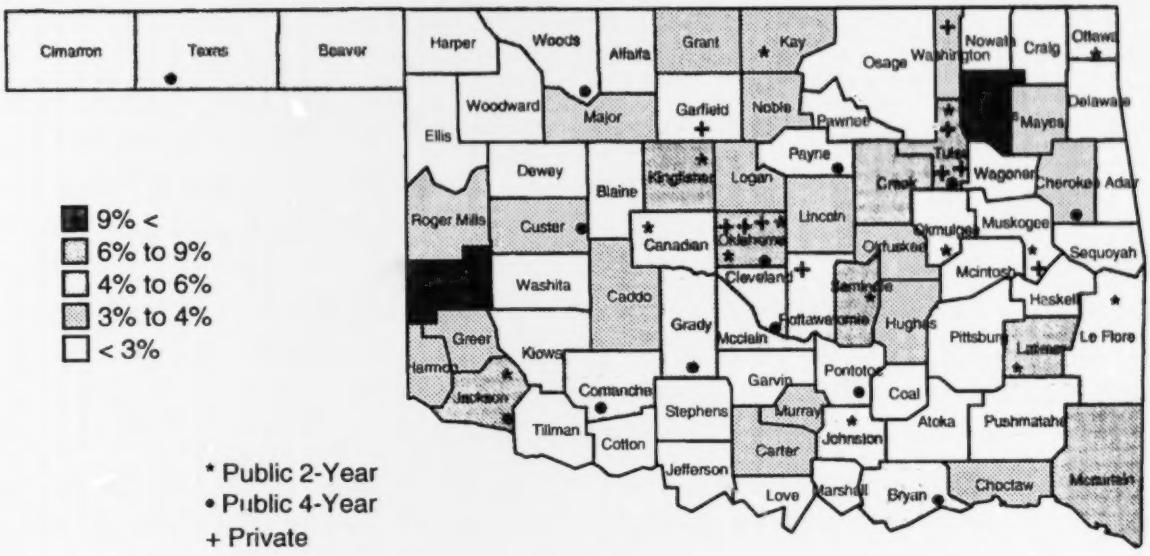
FIGURE 19

Fall 1997 Part-Time Undergraduates as a Proportion of 1998 Population Age 25-44



State = 5.5%
Source: Oklahoma Board of Regents: U.S. Census Bureau

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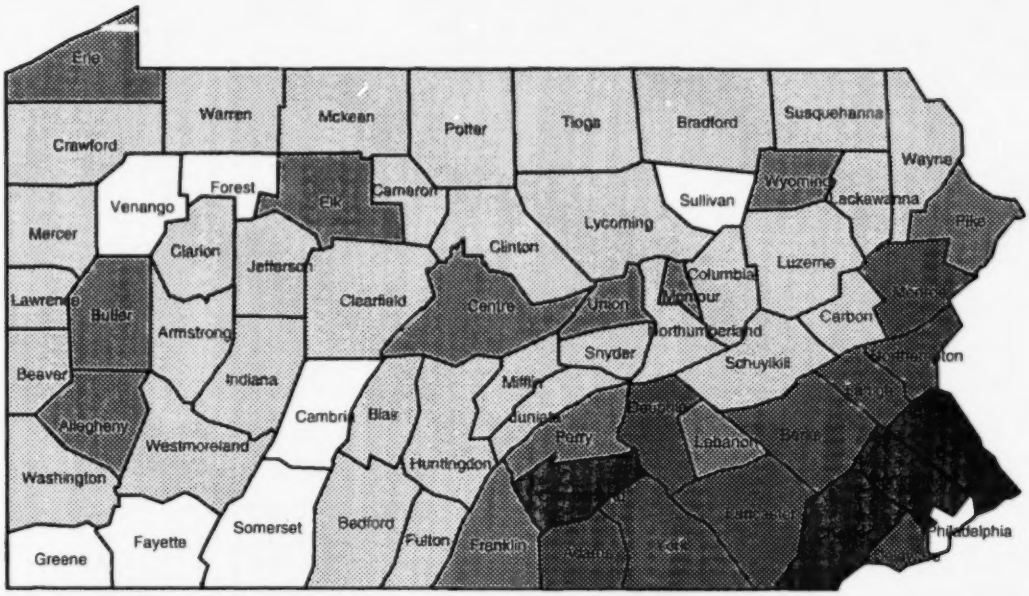
FIGURE 20

Estimated Median Household Income (1997)



- $45,000 <
- $40,000 to $45,000
- $35,000 to $40,000
- $30,000 to $35,000
- < $30,000

State = $37,267
Source: U.S. Census Bureau

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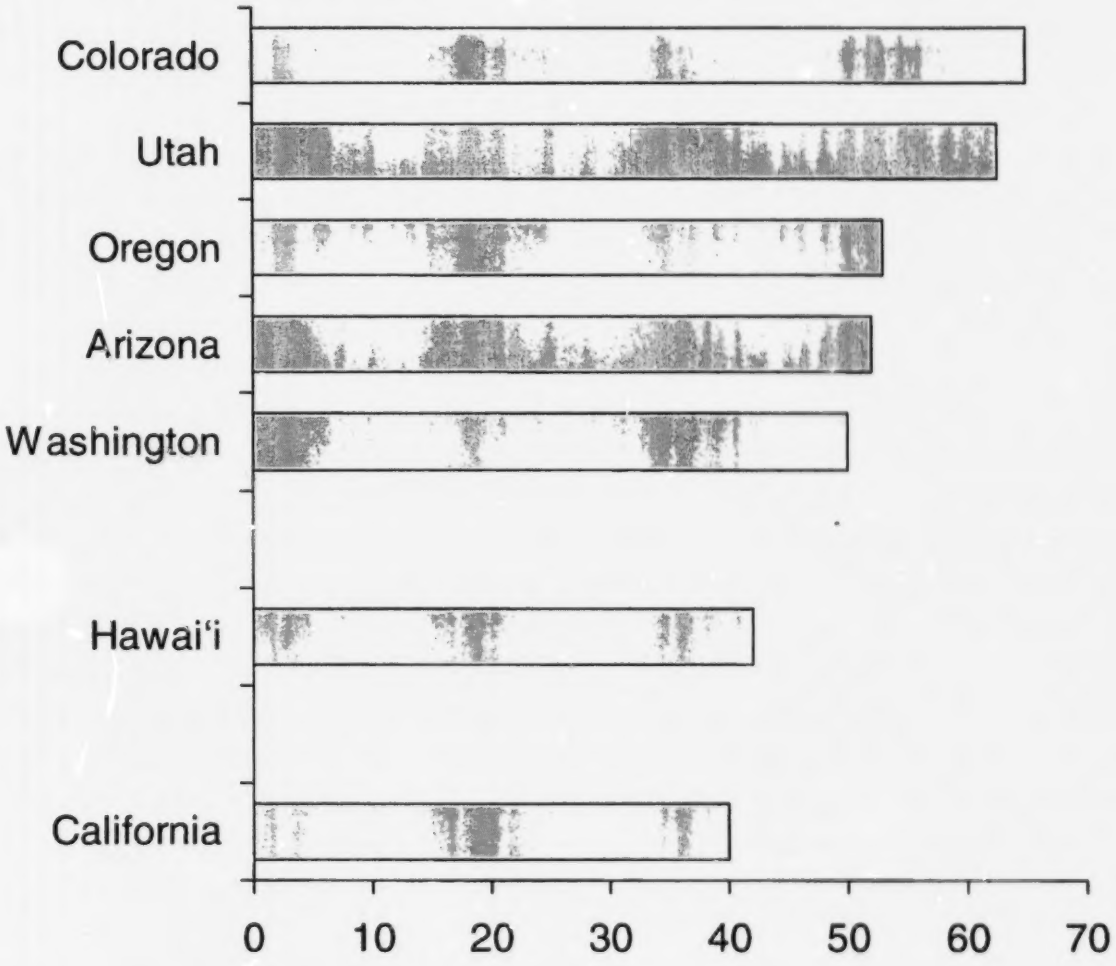
FIGURE 21

Median Total Family Income, by Quintiles.
Data source: Three year average, March CPS, 1997-1999.

Year: 1997-99	MEDIAN TOTAL FAMILY INCOMES OF QUINTILES				
STATES	1st Quintile Low - 20	2nd Quintile 20-40	3rd Quintile 40-60	4th Quintile 60-80	5th Quintile 80-100
ALABAMA	8,394	22,256	38,000	56,044	92,900
ALASKA	14,128	32,592	52,081	73,440	115,850
ARIZONA	9,300	19,560	31,000	50,020	91,675
ARKANSAS	8,256	19,180	30,360	44,220	73,040
CALIFORNIA	9,900	21,793	36,328	58,820	104,896
COLORADO	12,000	28,087	45,156	65,000	106,080
CONNECTICUT	12,000	30,000	50,060	77,662	127,424
DELAWARE	12,000	27,840	45,448	67,100	110,577
FLORIDA	9,660	21,240	34,703	53,150	91,885
GEORGIA	10,300	24,920	39,857	59,622	98,128
HAWAII	10,280	26,000	42,131	66,202	106,632
IDAHO	10,857	22,500	36,008	52,070	85,210
ILLINOIS	11,900	28,211	45,678	67,704	110,605
INDIANA	11,886	27,500	42,000	57,144	92,123
IOWA	12,600	25,402	39,048	55,325	92,511
KANSAS	11,206	24,653	40,162	59,550	101,250
KENTUCKY	9,000	22,444	39,100	55,926	93,506
LOUISIANA	7,725	19,710	34,165	53,805	90,830
MAINE	10,912	23,590	36,505	52,122	85,000
MARYLAND	13,200	32,500	50,278	74,074	119,200
MASSACHUSETTS	10,920	27,000	46,600	70,968	116,674
MICHIGAN	11,616	27,711	45,766	67,169	107,825
MINNESOTA	12,230	29,863	47,758	69,038	104,451
MISSISSIPPI	7,777	18,720	31,095	47,400	80,000
MISSOURI	11,280	26,144	42,100	59,125	93,457
MONTANA	9,156	20,000	32,900	47,947	76,614
NEBRASKA	11,000	24,371	39,000	58,400	91,999
NEVADA	12,100	25,936	40,040	57,800	96,671
NEW HAMPSHIRE	12,728	29,500	45,938	65,202	109,492
NEW JERSEY	12,090	31,121	52,596	76,000	126,000
NEW MEXICO	7,600	18,079	29,600	47,100	78,865
NEW YORK	7,800	21,003	38,400	60,500	107,000
NORTH CAROLINA	10,248	23,603	39,279	58,606	97,888
NORTH DAKOTA	10,635	23,152	37,187	53,452	81,815
OHIO	10,640	26,073	43,598	65,000	103,470
OKLAHOMA	9,000	21,588	35,000	50,390	85,000
OREGON	10,193	23,000	39,002	58,577	100,149
PENNSYLVANIA	11,566	26,340	43,300	64,008	108,438
RHODE ISLAND	9,000	24,000	42,000	64,000	105,494
SOUTH CAROLINA	10,568	24,802	38,332	58,150	89,066
SOUTH DAKOTA	10,386	23,944	35,999	52,767	91,542
TENNESSEE	9,600	21,700	35,300	52,004	88,354
TEXAS	9,000	20,953	34,222	52,625	93,066
UTAH	14,120	30,150	44,656	60,805	95,883
VERMONT	11,245	25,000	39,710	55,000	86,960
VIRGINIA	11,148	27,210	45,000	68,500	114,925
WASHINGTON	10,978	28,155	45,000	64,634	110,398
WESTVIRGINIA	7,646	18,535	30,564	46,125	78,778
WISCONSIN	13,013	28,815	45,156	63,720	96,600
WYOMING	10,642	24,018	37,203	53,712	85,180
TOTAL STATES	10,005	24,000	39,466	60,000	100,649

FIGURE 22

Number of Baccalaureate Degrees Awarded per 100 High School Graduates (1997)

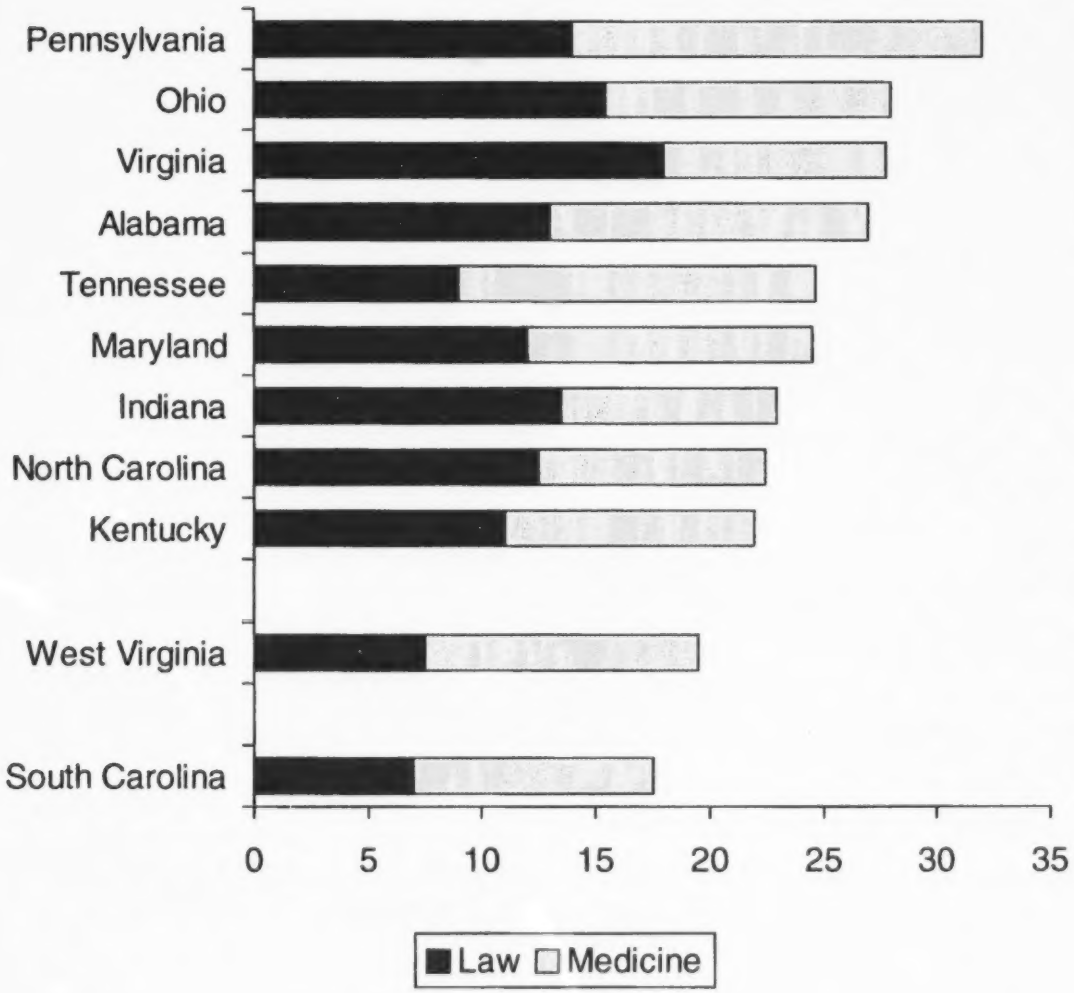


Source: NCES, IPEDS, 1997; WICHE, High School Graduates, 1996-2012

Note: Divisor is High School Graduates in 1992

FIGURE 23

Number of 1997 First Professional Degrees per 100,000 Population



Source: NCES, IPEDS, 1997; U.S. Census 1990

Note: Divisor is 1990 Census Population for State

FIGURE 24

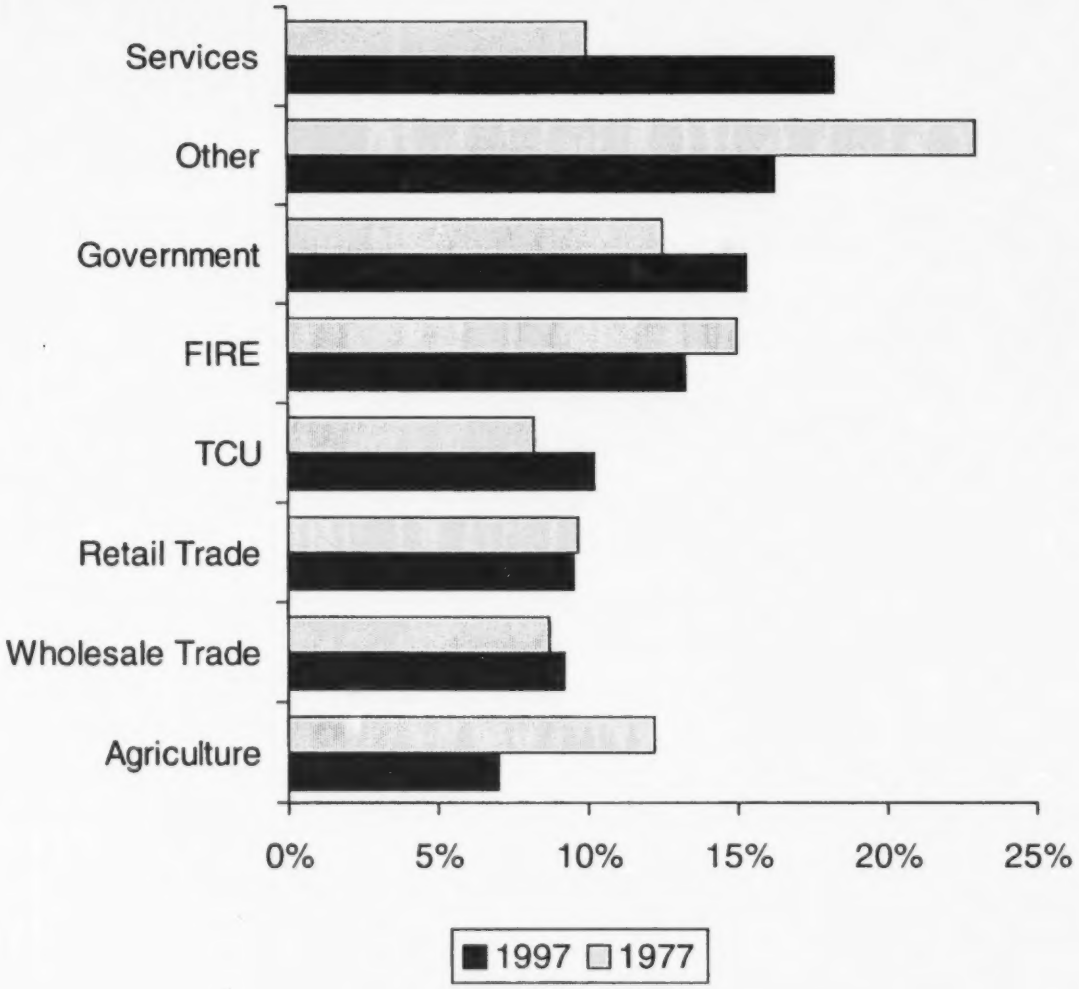
Number of Baccalaureate Degrees Awarded per 1,000 High School Graduates (1997)

	Selected Fields					
	CIS	**Engin.**	**Educ.**	**Business**	**Sciences**	**Health**
West Virginia	3.3	24.2	52.2	62.3	26.8	43.0
Alabama	9.8	32.7	71.1	115.3	32.9	54.5
Indiana	8.8	49.3	61.5	95.0	33.7	45.1
Kentucky	5.8	23.2	56.0	65.6	31.5	38.1
Maryland	17.6	29.1	34.1	62.4	42.7	31.0
North Carolina	11.7	31.4	50.5	95.3	53.2	35.1
Ohio	8.4	28.7	45.4	76.2	28.8	32.7
Pennsylvania	10.8	34.2	58.2	93.6	41.7	51.1
South Carolina	6.0	23.6	53.4	89.4	43.6	28.4
Tennessee	4.8	29.5	27.4	80.1	33.2	35.2
Virginia	16.2	28.4	13.6	91.6	45.5	30.6

Sources: NCES, IPEDS, 1997; WICHE, High School Graduates, 1996-2012

FIGURE 25

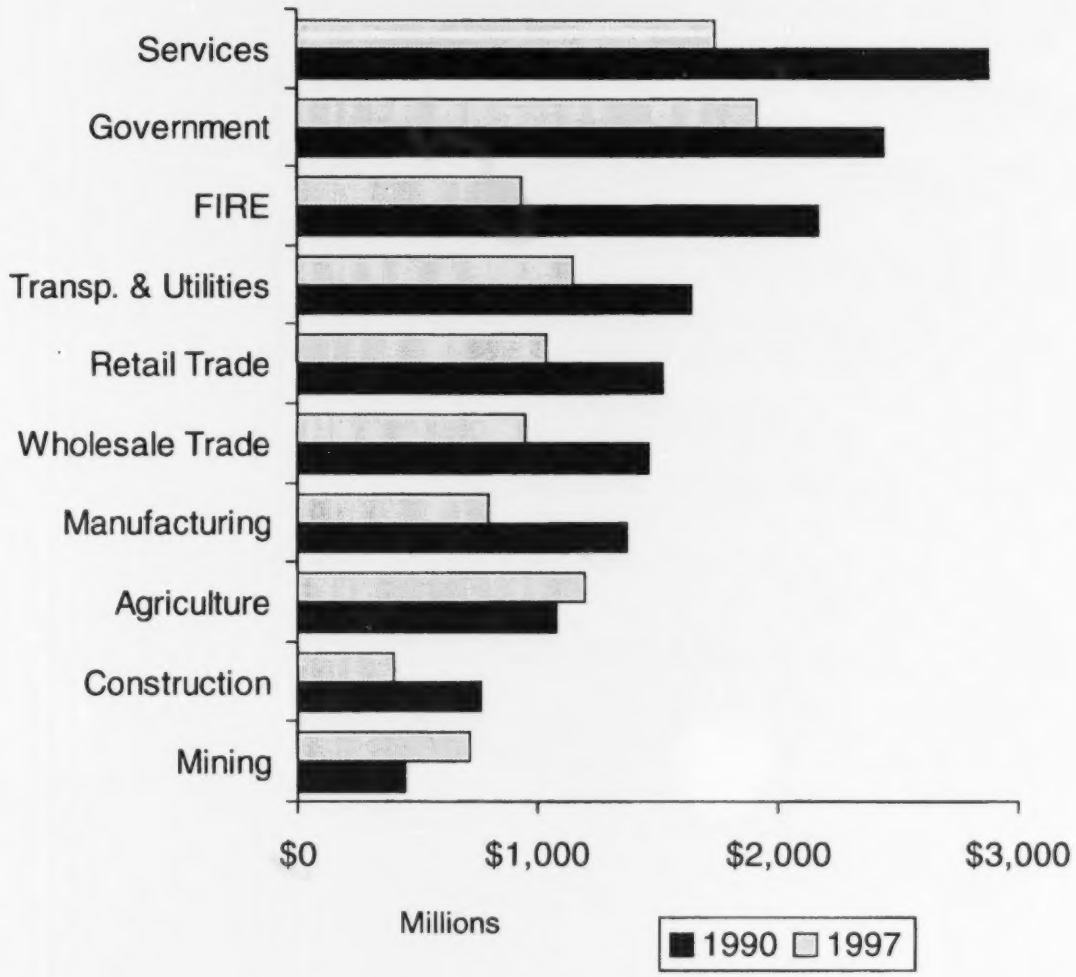
Percent of Gross State Product by Industry North Dakota (1977 and 1997)



Source: North Dakota State Data Center

FIGURE 26

Absolute Value of Gross State Product by Industry North Dakota (1990 and 1997)



Source: North Dakota State Data Center

FIGURE 27

INDICATORS

STATE NEW ECONOMY SCORES IN ALPHABETICAL ORDER

	Overall		Office Jobs		Managerial/ Professional Jobs		Workforce Education		Export Focus of Manufacturing		Foreign Direct Investment		"Gazelle" Jobs		Job Churning		IPOs	
State	**Rank**	**Score**	**Rank**	**Score**	**Rank**	**Score**	**Rank**	**Score**	**Rank**	**Score**	**Rank**	**Score**	**Rank**	**Score**	**Rank**	**Score**	**Rank**	**Score**
Alabama	44	32.28	36	16.2%	35	22.6%	44	48.0	35	15.6%	34	3.1%	20	14.3%	29	2.3%	44	0.04%
Alaska	13	57.70	48	12.6%	20	25.3%	2	73.3	1	49.3%	24	3.5%	49	11.3%	42	1.8%	36	0.11%
Arizona	10	59.23	26	18.5%	24	24.5%	12	66.2	9	20.8%	39	2.7%	3	17.7%	5	3.3%	23	0.25%
Arkansas	49	26.22	42	15.0%	43	20.9%	48	42.7	41	14.7%	37	3.0%	16	14.6%	14	2.8%	45	0.04%
California	2	74.25	17	19.0%	14	26.3%	5	69.7	10	20.5%	20	3.8%	6	16.1%	2	3.6%	15	0.49%
Colorado	3	72.32	15	19.1%	4	27.9%	1	75.9	17	18.2%	25	3.5%	28	13.6%	3	3.5%	4	1.05%
Connecticut	5	64.89	4	24.3%	2	30.3%	8	68.8	3	24.2%	7	5.1%	37	12.9%	38	1.9%	2	1.22%
Delaware	9	59.87	1	26.7%	5	27.8%	27	59.94	14	19.9%	14	4.3%	39	12.6%	20	2.5%	47	0.00%
Florida	20	50.75	8	21.2%	16	25.6%	30	56.6	50	7.9%	29	3.2%	7	15.8%	16	2.8%	14	0.51%
Georgia	25	46.61	18	18.8%	21	25.1%	35	54.2	40	14.8%	6	5.2%	13	14.8%	8	3.0%	19	0.31%
Hawaii	26	46.14	16	19.1%	40	22.0%	10	66.3	45	14.0%	1	8.8%	50	9.2%	10	2.9%	46	0.02%
Idaho	23	47.93	47	13.3%	46	19.9%	20	60.9	6	22.0%	46	2.0%	11	15.4%	11	2.9%	34	0.14%
Illinois	22	48.37	5	22.9%	8	27.7%	22	60.6	15	18.6%	19	4.0%	17	14.4%	24	2.4%	16	0.39%
Indiana	37	40.95	34	16.7%	36	22.3%	42	48.5	23	17.8%	15	4.2%	26	13.8%	32	2.2%	30	0.17%
Iowa	42	33.51	28	17.7%	38	22.1%	37	52.7	39	14.9%	42	2.4%	46	12.1%	49	1.4%	31	0.16%
Kansas	27	45.80	33	16.7%	11	26.4%	16	62.5	33	15.7%	30	3.2%	12	15.0%	25	2.4%	41	0.06%
Kentucky	39	39.40	40	15.2%	34	23.1%	49	42.5	29	16.6%	11	4.8%	19	14.4%	30	2.3%	9	0.68%
Louisiana	47	28.22	27	18.2%	17	25.5%	46	47.5	28	17.0%	38	2.9%	32	13.5%	41	1.8%	28	0.18%
Maine	28	45.62	39	15.2%	28	23.7%	34	54.3	18	18.1%	10	4.8%	22	14.0%	33	2.1%	5	1.04%
Maryland	11	59.16	22	18.7%	9	27.5%	7	69.0	34	15.6%	21	3.6%	43	12.4%	9	3.0%	17	0.39%
Massachusetts	1	82.27	2	26.4%	1	34.9%	6	69.1	5	22.7%	4	5.4%	9	15.5%	18	2.6%	21	0.26%
Michigan	34	44.59	24	18.6%	45	20.5%	31	56.3	11	20.4%	28	3.4%	42	12.4%	31	2.2%	38	0.08%
Minnesota	14	56.53	7	21.5%	7	27.7%	14	63.6	20	18.0%	22	3.6%	35	13.2%	45	1.7%	22	0.25%
Mississippi	50	22.63	46	13.8%	44	20.9%	47	46.9	48	12.9%	47	1.8%	21	14.2%	44	1.7%	33	0.15%
Missouri	35	44.24	12	20.2%	31	23.5%	38	52.7	36	15.3%	36	3.0%	8	15.5%	36	2.0%	32	0.15%
Montana	46	28.98	49	11.7%	42	21.6%	23	60.3	44	14.1%	50	1.0%	38	12.7%	48	1.5%	47	0.00%
Nebraska	36	41.81	13	20.1%	18	25.4%	26	59.7	47	13.7%	45	2.0%	18	14.4%	43	1.8%	25	0.21%
Nevada	21	49.03	11	20.5%	50	17.8%	28	57.6	38	15.2%	33	3.1%	1	19.3%	1	4.1	40	0.07%
New Hampshire	7	62.45	29	17.6%	10	26.9%	9	66.5	7	21.2%	9	5.1%	5	16.2%	22	2.5%	35	0.11%
New Jersey	8	60.86	6	21.7%	15	25.7%	17	62.3	26	17.3%	5	5.3%	36	13.1%	4	3.4%	10	0.64%
New Mexico	19	51.43	38	15.3%	13	26.4%	21	60.7	42	14.5%	44	2.1%	24	13.9%	23	2.5%	1	1.55%
New York	16	54.48	3	26.4%	25	24.3%	19	61.8	19	18.0%	13	4.3%	41	12.5%	7	3.0%	12	0.59%
North Carolina	30	45.16	30	17.2%	22	24.9%	39	52.4	37	15.2%	3	6.2%	23	13.9%	27	2.3%	29	0.18%
North Dakota	45	28.99	45	14.2%	49	18.1%	25	59.8	49	12.2%	48	1.4%	45	12.3%	50	1.3%	8	0.78%
Ohio	33	44.77	14	20.0%	23	24.6%	40	50.8	13	20.0%	17	4.2%	29	13.6%	28	2.3%	20	0.31%
Oklahoma	40	38.63	35	16.4%	26	24.2%	32	56.0	31	16.0%	43	2.3%	27	13.7%	15	2.8%	3	1.06%
Oregon	15	56.10	31	17.1%	37	22.3%	11	66.3	8	20.9%	35	3.0%	2	17.8%	26	2.3%	24	0.22%
Pennsylvania	24	46.72	10	20.8%	12	26.4%	43	48.3	24	17.7%	16	4.2%	34	13.4%	19	2.5%	27	0.19%
Rhode Island	29	45.31	9	21.2%	19	25.3%	29	57.2	21	18.0%	18	4.1%	25	13.8%	40	1.9%	47	0.00%
South Carolina	38	39.69	37	15.8%	29	23.6%	41	49.7	22	18.0%	2	6.7%	44	12.3%	34	2.1%	37	0.10%
South Dakota	43	32.33	41	15.0%	48	19.5%	33	54.5	30	16.5%	49	1.4%	33	13.4%	46	1.7%	47	0.00%
Tennessee	31	45.14	19	18.8%	27	23.8%	45	47.7	32	15.7%	8	5.1%	14	14.8%	17	2.7%	39	0.07%
Texas	17	52.31	25	18.6%	47	19.5%	24	60.2	4	23.9%	26	3.5%	15	14.6%	13	2.8%	11	0.63%
Utah	6	63.98	20	18.7%	39	22.1%	3	72.4	25	17.7%	27	3.4%	4	16.7%	6	3.1%	18	0.34%
Vermont	18	51.87	44	14.3%	32	23.5%	15	62.8	16	18.5%	32	3.2%	30	13.6%	47	1.5%	7	0.95%
Virginia	12	58.76	21	18.7%	3	29.6%	13	65.3	46	14.0%	12	4.4%	31	13.5%	21	2.5%	6	1.02%
Washington	4	68.99	32	16.8%	6	27.7%	4	70.8	2	31.2%	31	3.2%	40	12.6%	12	2.8%	13	0.54%
West Virginia	48	26.79	43	14.6%	33	23.1%	50	37.9	12	20.2%	23	3.5%	48	11.6%	37	2.0%	43	0.04%
Wisconsin	32	44.92	23	18.6%	30	23.6%	36	53.2	27	17.3%	40	2.5%	10	15.4%	35	2.1%	26	0.19%
Wyoming	41	34.49	50	10.7%	41	21.8%	18	62.2	43	14.3%	41	2.5%	47	11.9%	39	1.9%	42	0.05%
U.S. Average		**48.07**		**19.6%**		**24.9%**		**58.5**		**18.1%**		**3.9%**		**14.3%**		**2.7%**		**0.42%**

State	Online Population		Commercial Internet Domains		Education Technology		Digital Government		High-Tech Jobs		Scientists and Engineers		Patents		Industry R&D Investment		Venture Capital	
	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score
AL	45	25%	43	0.13	48	0.75	34	56.1	28	3.0%	36	0.32%	45	0.15	35	0.7%	34	0.03%
AK	1	52%	24	0.21	1	3.81	3	76.6	44	1.6%	15	0.47%	46	0.14	44	0.1%	44	0.00%
AZ	14	34%	4	0.34	33	1.60	13	68.8	12	5.3%	30	0.35%	16	0.51	23	1.3%	13	0.12%
AR	49	19%	48	0.11	31	1.67	49	41.2	40	1.9%	50	0.20%	50	0.10	42	0.3%	44	0.00%
CA	11	36%	2	0.45	29	1.76	22	62.8	4	6.2%	12	0.51%	7	0.75	6	3.1%	2	0.50%
CO	2	47%	6	0.32	13	2.61	30	58.5	2	7.5%	6	0.56%	12	0.60	15	1.7%	3	0.34%
CT	19	32%	18	0.26	42	1.31	24	61.0	16	4.8%	9	0.54%	2	0.88	5	3.3%	14	0.11%
DE	17	33%	16	0.27	14	2.55	40	50.5	37	1.5%	1	1.07%	1	1.12	2	4.0%	40	0.00%
FL	27	31%	12	0.28	21	2.23	6	72.7	25	3.4%	48	0.23%	27	0.32	25	1.2%	12	0.13%
GA	20	32%	22	0.24	35	1.51	48	44.3	19	4.1%	40	0.30%	29	0.27	38	0.6%	8	0.16%
HI	21	32%	13	0.28	3	3.63	45	46.3	46	1.5%	19	0.46%	47	0.14	50	0.0%	30	0.04%
ID	9	37%	37	0.16	16	2.54	44	48.0	13	3.2%	28	0.36%	6	0.79	8	3.1%	37	0.01%
IL	43	26%	20	0.24	38	1.42	50	39.4	21	4.0%	23	0.38%	14	0.53	17	1.6	15	0.11%
IN	41	26%	31	0.18	23	1.94	16	67.1	33	2.5%	43	0.29%	24	0.42	12	1.8%	33	0.03%
IA	38	27%	45	0.13	11	2.72	26	59.5	31	2.6%	39	0.31%	30	0.27	21	1.4%	35	0.02%
KS	23	32%	26	0.20	27	1.81	5	72.9	30	2.6%	37	0.32%	37	0.21	30	0.9%	26	0.07%
KY	46	23%	42	0.13	6	2.97	23	62.1	38	2.1%	47	0.24%	41	0.17	39	0.5%	23	0.08%
LA	47	21%	44	0.13	49	0.68	47	45.0	48	1.4%	38	0.31%	38	0.21	49	0.1%	36	0.01%
ME	16	34%	28	0.20	8	2.92	42	48.9	36	1.8%	21	0.41%	44	0.15	28	1.0%	32	0.03%
MD	3	46%	9	0.30	40	1.38	12	69.4	10	5.1%	3	0.85%	23	0.43	33	0.8%	19	0.10%
MA	8	39%	3	0.35	34	1.53	14	67.7	3	7.5%	4	0.81%	4	0.83	3	3.8%	1	0.62%
MI	42	26%	36	0.17	39	1.40	9	70.6	34	2.4%	27	0.36%	10	0.64	1	4.9%	31	0.04%
MN	12	35%	23	0.23	7	2.92	8	71.2	7	5.5%	24	0.38%	9	0.72	11	2.0%	7	0.17%
MS	50	17%	50	0.08	46	0.90	29	58.7	47	1.7%	46	0.26%	48	0.12	45	0.1%	41	0.00%
MO	32	28%	29	0.19	28	1.78	4	73.5	27	3.0%	31	0.34%	33	0.25	19	1.5%	16	0.11%
MT	31	30%	41	0.14	19	2.35	41	49.8	49	1.2%	16	0.46%	36	0.23	47	0.1%	25	0.07%
NE	30	30%	40	0.14	4	3.16	15	67.2	20	4.1%	34	0.33%	39	0.19	41	0.3%	42	0.00%
NV	35	27%	1	0.46	47	0.78	32	56.8	45	1.7%	49	0.23%	35	0.24	37	0.7%	28	0.07%
NH	5	41%	10	0.29	37	1.42	35	55.3	1	7.8%	25	0.37%	8	0.73	18	1.5%	4	0.29%
NJ	24	32%	15	0.28	43	0.99	28	59.1	8	5.5%	5	0.56%	5	0.81	7	3.1%	11	0.14%
NM	22	32%	34	0.17	44	0.96	37	52.4	22	3.3%	2	1.00%	26	0.33	4	3.6%	44	0.00%
NY	36	27%	14	0.28	41	1.36	25	60.1	17	4.6%	10	0.53%	11	0.62	20	1.5%	24	0.07%
NC	40	26%	30	0.19	24	1.93	33	56.5	23	3.6%	22	0.40%	25	0.34	27	1.2%	10	0.15%
ND	33	28%	49	0.09	15	2.55	39	50.9	39	1.6%	18	0.46%	43	0.16	48	0.1%	44	0.00%
OH	28	30%	27	0.20	36	1.49	27	59.4	32	2.7%	26	0.37%	18	0.50	22	1.4%	29	0.06%
OK	39	26%	35	0.17	50	0.42	38	52.1	29	3.0%	35	0.32%	28	0.30	40	0.4%	38	0.01%
OR	13	34%	11	0.29	9	2.82	18	65.7	9	4.8%	20	0.42%	19	0.48	29	0.9%	18	0.11%
PA	34	27%	25	0.20	45	0.93	10	70.4	26	3.3%	17	0.46%	17	0.50	16	1.7%	17	0.11%
RI	25	31%	17	0.26	32	1.61	43	48.2	24	3.6%	8	0.55%	15	0.52	10	2.1%	43	0.00%
SC	37	27%	38	0.15	30	1.75	21	63.4	41	2.2%	45	0.28%	32	0.26	31	0.9%	20	0.10%
SD	44	25%	47	0.11	17	2.45	7	71.5	14	3.4%	42	0.30%	49	0.12	46	0.1%	44	0.00%
TN	26	31%	33	0.17	20	2.34	20	63.7	42	2.0%	29	0.35%	34	0.25	34	0.7%	6	0.18%
TX	18	33%	21	0.24	25	1.93	31	58.2	11	4.8%	33	0.34%	22	0.45	26	1.2%	9	0.16%
UT	4	46%	5	0.32	5	3.00	19	65.7	15	4.5%	11	0.52%	13	0.59	14	1.8%	22	0.09%
VT	15	34%	19	0.25	12	2.64	36	55.3	5	5.2%	7	0.55%	3	0.86	13	1.8%	39	0.01%
VA	7	40%	7	0.31	26	1.88	17	67.0	6	5.2%	13	0.50%	31	0.26	32	0.8%	21	0.10%
WA	6	41%	8	0.30	2	3.79	1	79.7	18	4.1%	14	0.49%	21	0.46	9	2.9%	5	0.24%
WV	48	20%	46	0.11	18	2.38	46	46.1	43	1.8%	41	0.30%	40	0.18	36	0.7%	44	0.00%
WI	29	30%	32	0.18	22	1.99	2	79.5	35	2.5%	44	0.29%	20	0.47	24	1.3%	27	0.07%
WY	10	36%	39	0.15	10	2.75	11	69.8	50	1.0%	32	0.34%	42	0.17	43	0.2%	44	0.00%
U.S. Average		**31%**		**0.26**		**2.0**		**60.4**		**4.5%**		**0.42%**		**0.48**		**1.8%**		**0.17%**

FIGURE 28

Missouri

- State Press Release
- Detailed State Grades and Rankings

Performance Index					
2000 Grade	Employment	Earnings & Job Quality	Equity	Quality of Life	Resource Efficiency
B	A	B	B	C	C

Business Vitality Index			
2000 Grade	Competitiveness of Existing Businesses	Structural Diversity	Entrepreneurial Energy
C	C	A	B

Development Capacity Index					
2000 Grade	Human Resources	Financial Resources	Infrastructure Resources	Amenity Resources	Innovation Assets
C	C	C	B	B	C

Click on the link below and then click on Detailed State Grades and Rankings.

http://drc.cfed.org/?section=grades&page=state&state=Missouri

About the Authors

Dennis Jones is president of the National Center for Higher Education Management Systems (NCHEMS). He is widely recognized for his work in state and institutional approaches to budgeting and resource allocation; strategic planning; educational needs assessment; faculty workload and productivity; information for strategic decisionmaking; and the development of educational indicators. Mr. Jones has written many monographs and articles on these topics, has presented his work at many regional, national, and international conferences, and has consulted with hundreds of institutions and state higher education agencies on management issues. Prior to joining NCHEMS in 1969, Mr. Jones served as an administrator at Rensselaer Polytechnic Institute, where he received a graduate and undergraduate degree in engineering management.

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Measuring Up 2000: The State-by-State Report Card for Higher Education (November 2000, #00-3). This first-of-its-kind report card grades each state on its performance in higher education. The report card also provides comprehensive profiles of each state and brief states-at-a-glance comparisons. Visit **www.highereducation.org** to download *Measuring Up 2000* or to make your own comparisons of state performance in higher education. Printed copies are available for $25.00 by calling 888-269-3652 (discounts available for large orders).

Some Next Steps for States: A Follow-up to Measuring Up 2000, by Dennis Jones and Karen Paulson (June 2001, #01-2). Now that *Measuring Up 2000* has been released, what are the next steps states can take to improve performance in higher education? This report provides an introduction to the kinds of actions states can take to bridge the gap between the performance areas identified in *Measuring Up 2000* and the formulation of effective policy.

Assessing Student Learning Outcomes: A Supplement to Measuring Up 2000, by Peter Ewell and Paula Ries (December 2000, #00-5). National survey of state efforts to assess student learning outcomes in higher education.

Recent State Policy Initiatives in Education: A Supplement to Measuring Up 2000, by Aims McGuinness, Jr. (December 2000, #00-6). Highlights education initiatives that states have adopted since 1997–98.

Technical Guide Documenting Methodology, Indicators and Data Sources for Measuring Up 2000 (November 2000, #00-4).

A Review of Tests Performed on the Data in Measuring Up 2000, by Peter Ewell (June 2001, #01-1). Describes the statistical testing performed on the data in *Measuring Up 2000* by the National Center for Higher Education Management Systems.

A State-by-State Report Card on Higher Education: Prospectus (March 2000, #00-1). Summarizes the goals of the National Center's report card project.

Great Expectations: How the Public and Parents—White, African American and Hispanic—View Higher Education, by John Immerwahr with Tony Foleno (May 2000, #00-2). This report by Public Agenda finds that Americans overwhelmingly see higher education as essential for success. Survey results are also available for the following states:

Great Expectations: How Pennsylvanians View Higher Education (May 2000, #00-2b)
Great Expectations: How Floridians View Higher Education (August 2000, #00-2c)
Great Expectations: How Coloradans View Higher Education (August 2000, #00-2d)
Great Expectations: How Californians View Higher Education (August 2000, #00-2e)
Great Expectations: How New Yorkers View Higher Education (October 2000, #00-2f)
Great Expectations: How Illinois Residents View Higher Education (October 2000, #00-2h)

State Spending for Higher Education in the Next Decade: The Battle to Sustain Current Support, by Harold A. Hovey (July 1999, #99-3). This fiscal forecast of state and local spending patterns finds that the vast majority of states will face significant fiscal deficits over the next eight years, which will in turn lead to increased scrutiny of higher education in almost all states, and to curtailed spending for public higher education in many states.

South Dakota: Developing Policy-Driven Change in Higher Education, by Mario Martinez (June 1999, #99-2). Describes the processes for change in higher education that government, business and higher education leaders are creating and implementing in South Dakota.

Taking Responsibility: Leaders' Expectations of Higher Education, by John Immerwahr (January 1999, #99-1). Reports the views of those most involved with decision-making about higher education, based on a survey and focus groups conducted by Public Agenda.

The Challenges and Opportunities Facing Higher Education: An Agenda for Policy Research, by Dennis Jones, Peter Ewell, and Aims McGuinness (December 1998, #98-8). Argues that due to substantial changes in the landscape of postsecondary education, new state-level policy frameworks must be developed and implemented.

Higher Education Governance: Balancing Institutional and Market Influences, by Richard C. Richardson, Jr., Kathy Reeves Bracco, Patrick M. Callan, and Joni E. Finney (November 1998, #98-7). Describes the structural relationships that affect institutional effectiveness in higher education, and argues that state policy should strive for a balance between institutional and market forces.

Federal Tuition Tax Credits and State Higher Education Policy: A Guide for State Policy Makers, by Kristin D. Conklin (December 1998, #98-6). Examines the implications of the federal income tax provisions for students and their families, and makes recommendations for state higher education policy.

The Challenges Facing California Higher Education: A Memorandum to the Next Governor of California, by David W. Breneman (September 1998, #98-5). Argues that California should develop a new Master Plan for Higher Education.

Tidal Wave II Revisited: A Review of Earlier Enrollment Projections for California Higher Education, by Gerald C. Hayward, David W. Breneman and Leobardo F. Estrada (September 1998, #98-4). Finds that earlier forecasts of a surge in higher education enrollments were accurate.

Organizing for Learning: The View from the Governor's Office, by James B. Hunt Jr., chair of the National Center for Public Policy and Higher Education, and former governor of North Carolina (June 1998, #98-3). An address to the American Association for Higher Education concerning opportunity in higher education.

The Price of Admission: The Growing Importance of Higher Education, by John Immerwahr (Spring 1998, #98-2). A national survey of Americans' views on higher education, conducted and reported by Public Agenda.

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